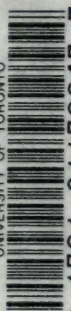
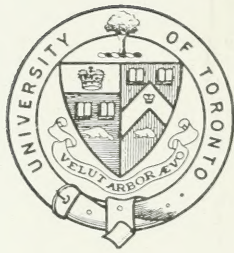


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TYCHONIS BRAHE DANI
OPERA OMNIA

AUSPICIIS SOCIETATIS LINGUÆ ET LITTERARUM DANICARUM
(DET DANSKE SPROG- OG LITTERATUR-SELSKAB)

TYCHONIS BRAHE DANI OPERA OMNIA

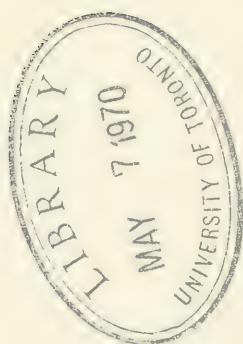
EDIDIT

I. L. E. DREYER
TOMUS XI



HAUNIÆ MCMXXIV
IN LIBRARIA GYLDENDALIANA
TYPIS NIELSEN & LYDICHE (AXEL SIMMELKIÆR)

Q B
3
B 83
t. 11



TYCHONIS BRAHE DANI THESAURUS OBSERVATIONUM

AD FIDEM CODICUM PRIMUM

INTEGRUM EDIDIT

I. L. E. DREYER

SUMPTIBUS INSTITUTI CARLSBERGICI

TOMUS II

HAUNIÆ MCMXXIV
IN LIBRARIA GYLDENDALIANA
TYPIS NIELSEN & LYDICHE (AXEL SIMMELKIÆR)

OBSERUATIONES ANNI 1586.

OBSERUATIONES SOLIS.

DIE 11 JANUARIJ.

| | |
|----------------------------|----------|
| Alt. ☉ merid. per Q. Tich. | 14 12 50 |
| per Q. Portat. | 14 12 45 |
| Decl. per Arm. subtt. | 19 52 0 |
| alt. pinn. | 19 52 40 |

DIE 14 JANUARIJ.

| | |
|-------------------------------|---|
| Decl. ☉ per Arm. rectificatas | |
| 11 ^H 20' | 18 57 ³ / ₄ vtroque pinn. |
| 11 50 | 18 57 vtroque |
| 12 0 | 18 57 ¹ / ₂ |
| | 18 57 altero pinn. |

DIE 15 JANUARIJ.

Post denuo rectificatum Quadrantem volubilem. Alt. ☉ in mer.

| | |
|----------------|--------------------|
| Per Q. volub. | 15 7 45 |
| Per Sext. nou. | 15 8 50 |
| Per Q. Tich. | 15 8 30 vet. pinn. |
| | 15 8 40 nouo |

Per Regulas minores

12158, resp. 15 8

Decl. per Arm. subtt. vno 18 57 15

Altero pinnacidio 18 57 10

Pone itaque declinationem 18 57 8

Non erat exquisitè serenum.

DIE 21 JANUARIJ.

| | |
|------------------------------------|--|
| Decl. ☉ per Armillas subterraneas. | |
| 11 ^H 38' | vno pinnac. 17 22 |
| | Altero pinnac. 17 22 ¹ / ₄ |
| 11 42 Eadem vno pinn. | 17 22 |
| | altero 17 22 ¹ / ₈ |
| Reiterata, vno pinn. | 17 21 ³ / ₄ |
| | altero 17 21 ⁵ / ₈ |

Sed tunc non erat bene serenum.

| | |
|----------------------------|-----------------------------------|
| Alt. ☉ merid. per Q. Tich. | 16 43 ¹ / ₃ |
| per Sext. vet. | 16 44 ¹ / ₂ |
| per Sext. nou. | 16 44 |

H. 0 4' Decl. ☉ per Arm. subterr.

17 21³/₄

altero pinnac. 17 22

Non erat bene serenum.

DIE 22 JANUARIJ.

| | |
|------------------------------------|---------|
| Alt. ☉ merid. per Q. Tich. vtroque | |
| pinn. | 17 0 10 |

per Sext. nou. 17 0 40,
perpendicularum non satis bene se
habuit.

per Sext. vet. 17 1 10
per Reg. min. 11894,
resp. 17 1

Decl. per Arm. subtt. 17 5¹/₄ vtroq. pin.

H. 12 10' reiterata 17 5¹/₄ vno pin.

17 5 0 altero

H. 12 15 repet. 17 5¹/₄ vtrobique

Decl. per Q. Tichon. 17 5¹/₈ bene con-
cordat. Ventus aliquo modo flabat.

DIE 23 JANUARIJ.

| | |
|--------------------------|-----------------------------------|
| Alt. ☉ mer. per Q. Tich. | 17 17 15 |
| per Sext. nou. | 17 17 50 |
| per Sext. vet. | 17 18 45 |
| Decl. ☉ per Arm. subtt. | 16 48 45 |
| altero pinn. | 16 48 50 |
| H. 12 2' repetita decl. | 16 48 ³ / ₄ |
| altero pinn. | 16 48 ³ / ₄ |
| 12 7 reiterata vtroq. | 16 48 ³ / ₄ |
| Vel ad minimum decl. | 16 48 ¹ / ₂ |
| reiterata obseruatione. | |

Decl. per Q. Tich. 16 48¹/₄

Per Sext. nouum 16 47²/₃

Per Sext. veter. 16 46³/₄

H. 2 3¹/₈', ☉ a merid. 30 55, Decl. per
Armillas subtt. 16 46¹/₂

vtroque pinn., Alt. ☉ 12¹/₂°

2 18⁵/₈ repet. decl. 16 46

vtroque, Alt. ☉ 11¹/₈.

3 11 Decl. 16 42¹/₂ Alt. 6¹/₂

3 31 16 39¹/₂ 5

3 36 16 38¹/₃ 4¹/₂

3 38²/₃ 16 37¹/₄ 4¹/₆

3 46 16 36 3

3 51 16 34¹/₂ 2²/₃

DIE 3 FEBRUARIJ.

*In meridie erat apprimè serenum
& aër purissimus qualis non ab ini-
tio huius anni extitit. Quare per ar-
millas maiores subterraneas circa
ipsum meridiem Declinatio ☉^{lis} ac-*

cepta est bis vel ter vtroque pinnacido 13° 21' A. Huic plane consentit Tichonicus Quadrans ad murum fixatus, qui præbuit vtroque pinnacido Altitudinem Solis satis exacte 20° 44½, qua sublata ab æquatoris elevatione 34 5½ relinquitur apparens Solis Declinatio 13° 21', plane consentiens cum armillarum obseruatione. Verum per vtrumque Sextantem nuper rectificatum fuit Altitudo Solis 20° 44½, ita vt ambo idem exacte præberent, eßetque hac ratione Declinatio Solis 20 secundis seu tertia parte vnus minuti minor quam ea quæ per armillas obseruabatur, sed fidendum potius obseruationi per muralem et per armillam.

| | |
|------------------------|----------|
| Altitudo ☉ obseruata | 20 44 30 |
| Parallaxis Solis add. | 2 45 |
| Altitudo vera | 20 47 15 |
| | 34 5 30 |
| Rurfus decl. | 13 18 15 |
| obseruata per armillas | 13 21 0 |
| Parallaxis subt. | 2 45 |
| | 13 18 15 |

Prouenit itaque vtroque Declin. vera Solis tam per armillas quam per Quadr. 13° 18½, huic respondet ex tabula declinationis locus ☉ in 24° 47' ♍. Ephemerides nostræ dant locum Solis in 24 38 ♍. Verum quia refractione radorum poterat esse 2½, igitur Declinatio vera erat tam ratione parallaxeos quam refractionis 13 20 45. Atque huic respondet locus ☉ 24 39 ♍, quod satis cum obseruatione quadrat. Ephemerides Mestlini habent 24 6 ♍, Alphonsinæ 24 57 ♍.

Pro refractione autem Solis peruestiganda ad hunc diem, quia adeo bene serenum erat, Solis declinationem etiam P. M. obseruavi in certo tempore, et data altitudine pro refractione cognoscenda, idque in hunc modum.

| H. | M. | Altitudo | Decl. apparens | Decl. resp. |
|----|----|----------|----------------|-------------|
| 3 | 3 | 10 50 | 13 17 | 13 18½ |
| 3 | 7 | 10 20 | 13 16½ | |
| 3 | 12 | 9 50 | 13 16 | |
| 3 | 20 | 9 0 | 13 15 | |
| 3 | 55 | 5 20 | 13 11 | |
| 4 | 0 | 4 50 | 13 10½ | 13 17 40 |
| 4 | 7 | 4 0 | 13 9½ | |
| 4 | 12 | 3 20 | 13 8½ | |
| 4 | 15 | 3 0 | 13 7½ | 13 17 30 |

Patet itaque, quod respectu visæ declinationis quæ erat in meridie 13 21 fecerit Sol refractionem hora 3 in altitudine quasi 11 part. 1½. Hora vero 4 in altitudine 5 partium proxime eandem fecerit fere 7'. Hora insuper 4½ in altitudine trium partium eandem effecit 10 scrupulorum, atque hinc non mirum est in meridie ipso in altitudine 21 partium quasi fuisse refractionem 2½ respectu eius loci vbi nulla est. Nam hæ, quæ hic limitantur, tantum ratione mutationis a mer. acceptæ Decl. quæ etiam per se obnoxia erat parallaxi intelligendæ veniunt.

DIE 7 FEBRUARIJ.

Alt. ☉ mer. per Q. Tich. 22 6 35 vtroq.
per Sext. nou. 22 8½ sed dubia
est, nam statim accepta est 22 7½,
Sole prope meridiem existente.
Per Sext. veter. 22 7½
Decl. ☉ Per Arm. subt. 11 58½ vtroq.
H. 0½ repetita Decl. 11 58½ vtroq.

DIE 13 FEBRUARIJ.

Alt. ☉ mer. (24 15½ veteri
per Mural. (24 15½ novo
Per Reg. minores pinn.
10855, resp. 24 15½
Per Sext. nouum 24 16½
Per Sext. veter. 24 16 0
Declinatio per Armillas
H. 12 M. 7 vno pinn. 9 49½
12 7½ altero 9 49½
12 12 vno 9 49½ } meli-
12 13½ altero 9 49½ } ores
12 17½ 9 49½ } bonæ
9 49½ }

DIE 21 FEBRUARIJ.

Alt. ☉ mer. per Q. Max. 27 $15\frac{1}{4}$
 per Q. Tich. 27 16 vtr. pinn.
 per Sext. nou. 27 $16\frac{1}{2}$
 Decl. ☉ per Arm. 6 50 M. vtro-
 que pinnacidio.

DIE 5 MARTIJ.

Alt. ☉ per Q. Tich. 31 56 20 vtroq.
 per Q. Max. 31 $55\frac{3}{4}$

DIE 9 MARTIJ.

Alt. ☉ mer.
 per Q. Tich. 33 30
 per Q. Volub. 33 $30\frac{1}{4}$
 per Sext. vet. 33 $30\frac{3}{4}$
 per Q. Max. 33 $30\frac{5}{8}$
 Non erat satis ferenum.
 Decl. ☉ per Armillas subterraneas.
 H. 12 13' vno pinn. 0 34 A.
 altero pinn. 0 $34\frac{1}{4}$
 12 16 vno 0 $34\frac{1}{2}$ } Tunc
 altero 0 $34\frac{2}{3}$ } erat
 12 20 vno 0 $34\frac{1}{2}$ } fere-
 altero 0 $34\frac{1}{2}$ } nius

DIE 10 MARTIJ.

Alt. ☉ mer. per Tich. 33 54 0
 altero pinn. 33 $54\frac{1}{2}$
 per Q. Max. 33 $54\frac{1}{4}$
 per Q. Volub. 33 54 0
 per Q. minor. 33 54 0
 per Sext. nou. 33 55
 per Sext. vet. 33 $53\frac{5}{8}$
 per Reg. min. 9404 $\frac{1}{2}$,
 resp. 33 54
 Decl. ☉ per Arm. subtr. 0° 11' 30" Mer.
 Non erat bene ferenum.

DIE 11 MARTIJ.

Alt. ☉ mer. { 34 $18\frac{1}{8}$ nouo
 per Q. Tich. { 34 $18\frac{1}{3}$ vet. pin.
 per Q. Max. 34 $18\frac{1}{2}$
 per Q. Volub. 34 $18\frac{1}{3}$
 per Q. min. 34 $18\frac{2}{3}$
 per Sext. vet. 34 $18\frac{1}{3}$
 Decl. per Arm. subtr. 0 12 $\frac{1}{2}$ Bor.
 Erat bene ferenum.

DIE 12 MARTIJ.

Alt. ☉ mer. per Q. Max. 34 $41\frac{3}{8}$

per Q. Volub. 34 $41\frac{1}{8}$
 per Q. min. 34 41
 per Sext. nou. 34 $41\frac{1}{2}$
 per Sext. vet. 34 $41\frac{2}{8}$
 per Reg. min. 34 42
 Decl. per Armillas 0 36 B.
 Non erat prorsus ferenum.

DIE 17 MARTIJ.

Alt. ☉ mer. per Tich. { 36 $39\frac{2}{3}$ vet. pin.
 { 36 $39\frac{1}{3}$ nouo
 per Q. Max. 36 $40\frac{1}{3}$
 per Reg. 8977 $\frac{1}{2}$ resp. 36 $39\frac{1}{3}$
 per Q. Volub. 36 $39\frac{1}{2}$
 per Sext. nou. 36 $40\frac{1}{4}$
 Decl. ☉ per Armillas 2 33 Bor.
 H. 12 M. 24 repetita 2 $33\frac{3}{4}$

DIE 19 MARTIJ.

Alt. ☉ per Tichon. { 37 26 vno pin.
 { 37 $26\frac{1}{8}$ altero
 per Q. Max. 37 27
 per Q. Volub. 37 $25\frac{1}{2}$
 per Q. min. 37 $25\frac{1}{2}$
 per Reg. min. 37 26
 per Sext. vet. 37 $26\frac{1}{8}$
 per Sext. nou. 37 25 40
 Decl. per Armillas 3 $19\frac{1}{2}$
 3 $19\frac{3}{4}$

DIE 28 MARTIJ.

Alt. ☉ mer. per Tich. { 40 $52\frac{1}{4}$ vno pin.
 { 40 $52\frac{1}{2}$ altero
 per Q. Max. 40 53
 per Q. Volub. 40 $52\frac{1}{2}$
 per Q. min. 40 $52\frac{1}{3}$
 per Sext. vet. 40 $52\frac{1}{2}$
 per Sext. nou. 40 $52\frac{1}{4}$
 Decl. per Arm. 6 $46\frac{1}{3}$ vno pin.
 subterr. 6 $46\frac{3}{4}$ altero

DIE 30 MARTIJ.

Alt. ☉ mer. per Q. Tich. 41 37 vtroque
 pinn.
 per Q. Max. 41 $37\frac{1}{2}$
 per Q. Volub. 41 $37\frac{1}{4}$
 per Q. minor. 41 38
 per Sext. vet. 41 $37\frac{1}{2}$
 per Sext. nou. 41 $37\frac{1}{4}$
 Decl. per Armillas 7 32

Inter nubes discurrentes obseruata
fatis exquisite.

DIE 1 APRILIS.

| | |
|-------------------------|------------------------------|
| Alt. ☉ mer. | { 42 21 $\frac{5}{6}$ vno |
| per Q. Tich. | { 42 22 $\frac{1}{3}$ altero |
| per Q. Max. | 42 22 $\frac{1}{3}$ |
| per Q. Volub. | 42 21 $\frac{1}{4}$ |
| per Q. minor. | 42 21 |
| per Sext. vet. | 42 22 $\frac{1}{3}$ |
| per Sext. nou. | 42 21 $\frac{1}{2}$ |
| per Reg. min. | 42 22 |
| Decl. per Arm. subterr. | 8 16 $\frac{1}{2}$ |
| Repetita | 8 16 $\frac{1}{2}$ |

DIE 12 APRILIS.

| | |
|--------------------------|----------------------------|
| Alt. ☉ mer. per Q. Tich. | 46 14 $\frac{5}{8}$ vtroq. |
| | pinn. |
| per Q. Volub. | 46 14 |
| per Q. Max. | 46 16 |
| per Sext. vet. | 46 15 $\frac{1}{4}$ |
| per Sext. nou. | 46 15 |
| per Reg. minor. | 46 15 |
| Decl. per Armillas | 12 8 $\frac{1}{2}$ vno |
| subterr. | 12 8 $\frac{1}{2}$ altero |

DIE 13 APRILIS.

| | |
|----------------------------|---------------------|
| Alt. ☉ mer. per Q. Tich. | 46 34 $\frac{5}{6}$ |
| per Q. Max. | 46 34 $\frac{5}{6}$ |
| per Q. Volub. | 46 34 $\frac{1}{2}$ |
| per Sext. vet. | 46 35 |
| per Sext. nou. | 46 34 $\frac{1}{2}$ |
| per Reg. min. | 46 34 $\frac{1}{2}$ |
| Decl. per Armill. subterr. | 12 29 vtroque |

DIE 16 APRILIS.

| | |
|--------------------------|----------------------------|
| Alt. ☉ mer. per Q. Tich. | 47 34 |
| per Q. Volub. | 47 33 $\frac{3}{4}$ |
| per Sext. vet. | 47 33 |
| per Sext. nou. | 47 33 $\frac{1}{2}$ |
| per Regulas | 47 33 $\frac{1}{2}$ |
| Decl. per Arm. subterr. | 13 28 vno pin. |
| | 13 28 $\frac{1}{2}$ altero |

DIE 18 APRILIS.

| | |
|--------------------|--------------------------------|
| Alt. ☉ mer. | { 48 12 $\frac{1}{3}$ vno pin. |
| per Q. Tich. | { 48 12 $\frac{1}{2}$ altero |
| per Q. Volub. | 48 11 $\frac{1}{2}$ |
| per Sext. nou. | 48 11 $\frac{1}{2}$ |
| per Sext. vet. | 48 11 $\frac{3}{4}$ |
| Decl. per Armillas | 14 6 $\frac{1}{4}$ vno pin. |
| | 14 6 $\frac{1}{2}$ altero |

DIE 19 APRILIS.

| | |
|-------------------------|---------------------------------|
| Alt. ☉ mer. | { 48 31 vno |
| per Q. Tich. | { 48 30 $\frac{3}{4}$ alt. pin. |
| per Q. Volub. | 48 30 $\frac{3}{4}$ |
| per Sext. vet. | 48 31 $\frac{1}{2}$ |
| per Sext. nou. | 48 30 $\frac{1}{2}$ |
| Decl. per Arm. subterr. | 14 26 vtroq. |
| | pinn. |

DIE 23 APRILIS.

| | |
|-------------------|---------------------------------|
| Alt. ☉ mer. | { 49 44 nouo pin. |
| per Q. Tich. | { 49 44 $\frac{1}{6}$ veteri |
| per Q. Volub. | 49 43 $\frac{1}{2}$ |
| per Sext. nou. | 49 43 $\frac{1}{4}$ |
| Decl. per Armill. | { 15 38 $\frac{1}{2}$ vno pinn. |
| subterr. | { 15 38 $\frac{1}{4}$ altero |

DIE 27 APRILIS.

| | |
|---------------------|---------------------------------|
| Alt. ☉ mer. | { 50 52 $\frac{2}{3}$ nouo |
| per Q. Tich. | { 50 52 $\frac{1}{2}$ vet. pin. |
| per Q. Volub. | 50 51 $\frac{3}{4}$ |
| per Sext. nou. | 50 52 |
| per Reg. min. 6701. | 50 51 |
| Decl. per Armill. | { 16 47 $\frac{1}{6}$ vno |
| subterr. | { 16 47 alt. pin. |

DIE 5 MAIJ.

| | |
|---------------------|---------------------------------|
| Alt. ☉ per Q. Tich. | { 52 56 $\frac{1}{6}$ nouo |
| | { 52 56 $\frac{1}{3}$ vet. pin. |
| per Q. Volub. | 52 56 $\frac{1}{2}$ |
| Decl. per Armill. | { 18 50 $\frac{1}{2}$ vno |
| subterr. | { 18 50 $\frac{1}{3}$ alt. pin. |

DIE 6 MAIJ.

| | |
|--------------------------|----------------------------|
| Alt. ☉ mer. per Q. Tich. | 53 10 $\frac{1}{4}$ vtroq. |
| | pinn. |
| per Q. Max. | 53 9 |
| per Q. Volub. | 53 9 $\frac{1}{4}$ |
| per Reg. min. | 53 9 |
| Decl. per Arm. subterr. | 19 9 |

DIE 7 MAIJ.

| | |
|---------------------|----------------------------------|
| Alt. ☉ mer. | { 53 24 nouo |
| per Q. Tich. | { 53 24 $\frac{1}{3}$ vet. pinn. |
| per Q. Max. | 53 23 $\frac{1}{2}$ |
| per Q. Volub. | 53 22 $\frac{3}{4}$ |
| per Reg. min. 6289. | 53 21 |
| Decl. ☉ merid. | 19 18 |
| | 19 18 $\frac{1}{4}$ alt. pin. |

EODEM DIE 7.¹

Obferuationes Solis pomeridianæ.

| H. | M. | Altitudo ☉ | Declinatio vifa |
|----|------------------|---------------------|--------------------|
| 2 | 0 | 46° 53' | 19° 20' |
| 2 | 19 | 45 4 $\frac{1}{2}$ | 20 $\frac{1}{4}$ |
| 2 | 43 | 42 15 | 20 $\frac{1}{2}$ |
| 3 | 8 | 39 16 $\frac{1}{8}$ | 21 |
| 3 | 34 | 35 50 $\frac{1}{2}$ | 21 $\frac{1}{4}$ |
| 4 | 4 | 32 0 | 21 $\frac{1}{3}$ |
| 4 | 16 | 30 8 $\frac{2}{3}$ | 21 $\frac{1}{2}$ |
| 4 | 35 $\frac{1}{2}$ | 27 40 | 22 $\frac{1}{4}$ |
| 5 | 57 | 16 20 | 23 $\frac{1}{2}$ |
| 6 | 14 | 13 50 | 23 $\frac{3}{4}$ |
| 6 | 33 | 12 22 $\frac{1}{2}$ | 24 $\frac{3}{4}$ |
| 6 | 45 $\frac{1}{2}$ | 9 45 | 25 $\frac{1}{3}$ |
| 6 | 52 | 8 50 | 26 $\frac{1}{3}$ |
| 6 | 56 | 8 10 | 26 $\frac{1}{2}$ |
| 7 | 4 | 7 25 | 27 |
| 7 | 9 | 6 40 | 27 $\frac{1}{2}$ |
| 7 | 16 | 6 0 | 28 $\frac{1}{2}$ |
| 7 | 19 $\frac{2}{3}$ | 5 30 | 29 |
| 7 | 22 $\frac{3}{4}$ | 5 0 | 29 $\frac{1}{2}$ |
| 7 | 26 $\frac{1}{2}$ | 4 30 | 30 $\frac{1}{6}$ |
| 7 | 31 | 4 0 | 31 |
| 7 | 35 $\frac{1}{2}$ | 3 30 | 32 $\frac{1}{2}$ |
| 7 | 40 | 3 0 | 33 $\frac{3}{4}$ |
| 7 | 44 $\frac{1}{3}$ | 2 30 | 35 $\frac{1}{2}$ |
| 7 | 48 $\frac{2}{3}$ | 2 0 | 37 $\frac{1}{3}$ |
| 7 | 53 $\frac{5}{6}$ | 1 30 | 40 |
| 7 | 58 $\frac{1}{3}$ | 1 0 | 42 $\frac{1}{2}$ |
| 8 | 3 $\frac{1}{2}$ | 0 30 | 45 $\frac{1}{2}$ |

Hæ obferuationes factæ sunt inueftigandæ solaris refractionis gratia.

☉ occi- { cum inferiori limbo 8^H 6^M
debat ad { quo ad centrum 8 7 $\frac{2}{3}$
vifum { cum superiori limbo 8 10 $\frac{1}{3}$

DIE 8 MAIJ.

Alt. ☉ mer. per Q. Tich. 53 37 $\frac{1}{2}$ vtroq.
pinn.

per Q. Max. 53 37 $\frac{2}{3}$
per Reg. min. 6245, 53 36 $\frac{2}{3}$

DIE 11 MAIJ.

Alt. ☉ mer. { 54 15 $\frac{1}{3}$ nouo
per Q. Tich. { 54 15 $\frac{2}{3}$ vet. pin.
per Q. Max. 54 15 $\frac{5}{6}$
per Q. Volub. 54 16 $\frac{1}{4}$

per Reg. min. 54 13 $\frac{1}{8}$
Decl. per Armillas 20 10 vtroq.
pin.

DIE 12 MAIJ.

Alt. ☉ mer. { 54 27 $\frac{3}{4}$ nouo
per Q. Tich. { 54 28 vet. pin.
per Q. Max. 54 28
per Q. Volub. 54 28
Decl. per Armillas 20 22
altero pinnac. 20 22 $\frac{1}{4}$

DIE 13 MAIJ.

Alt. ☉ mer. per Q. Tich. 54 39 $\frac{5}{6}$ vtroq.
per Q. Max. 54 39
per Q. Volub. 54 40
Decl. per Armillas 20 34 vtroq.

DIE 18 MAIJ.

Alt. ☉ mer. per Q. Tich. 55 33 vtroq.
per Q. Volub. 55 33
per Q. Max. 55 32
Decl. per Arm. subt. 21 28
altero pinnac. 21 27 $\frac{3}{4}$

DIE 20 MAIJ.

Alt. ☉ mer. { 55 52 nouo
per Q. Tich. { 55 52 $\frac{1}{8}$ vet. pin.
per Q. Max. 55 51 $\frac{1}{6}$
per Reg. min. 5874, 55 50

DIE 24 MAIJ.

Alt. ☉ mer. { 56 24 $\frac{5}{6}$ nouo
per Q. Tich. { 56 25 $\frac{1}{6}$ vet. pin.
per Q. Max. 56 25
per Reg. min. 5780, 56 24
per Q. Volub. 56 25 $\frac{1}{2}$
Decl. per Arm. subt. 22 20

DIE 25 MAIJ.

Alt. ☉ mer. { 56 32 nouo
per Q. Tich. { 56 32 $\frac{1}{5}$ vet pin.
per Q. Volub. 56 32 $\frac{1}{3}$
per Q. Max. 56 32 $\frac{1}{2}$
per Reg. min. 56 32
Decl. per Arm. subt. 22 26 $\frac{1}{2}$
altero pinnac. 22 26 $\frac{3}{4}$
Flante euronoto.

¹ E codice V.

DIE 26 MAIJ.

| | |
|---------------------------|----------------------------|
| Alt. ☉ mer. | { 56 39 $\frac{1}{2}$ nouo |
| per Q. Tich. | { 56 39 $\frac{1}{6}$ |
| per Q. Max. | 56 39 $\frac{2}{3}$ |
| per Reg. min. 5740, | 56 38 |
| per Q. Volub. | 56 39 $\frac{1}{2}$ |
| Decl. per Armillas | 22 33 $\frac{5}{6}$ vtroq. |
| Erat mediocriter serenum. | pinn. |

DIE 27 MAIJ.

| | |
|----------------------|---------------------------------|
| Alt. ☉ mer. | { 56 45 $\frac{2}{3}$ nouo |
| per Q. Tich. | { 56 45 $\frac{5}{6}$ vet. pin. |
| per Q. Volub. | 56 45 $\frac{1}{2}$ |
| per Q. Max. | 56 45 $\frac{2}{3}$ |
| Decl. per Arm. subt. | 22 40 |

DIE 28 MAIJ.

| | |
|--------------------------|---------------------|
| Alt. ☉ mer. per Q. Tich. | 56 52 vtroq. |
| per Q. Volub. | 56 51 $\frac{3}{4}$ |
| per Q. Max. | 56 51 |
| per Reg. min. 5702, | 56 51 $\frac{2}{3}$ |
| Decl. per Arm. subt. | 22 40 $\frac{1}{2}$ |
| altero pinnac. | 22 40 $\frac{1}{3}$ |

DIE 29 MAIJ.

| | |
|--------------------------|----------------------------|
| Alt. ☉ mer. per Q. Tich. | 56 57 $\frac{5}{6}$ vtroq. |
| per Q. Max. | 56 57 $\frac{1}{4}$ |
| per Q. Volub. | 56 58 |
| per Reg. min. | 56 58 |
| Decl. per Arm. subt. | 22 53 |
| altero pinn. | 22 52 $\frac{1}{2}$ |

DIE 1 JUNIJ.

| | |
|----------------------|---------------------------------|
| Alt. ☉ mer. | { 57 12 $\frac{1}{2}$ vet. pin. |
| per Q. Tich. | { 57 12 $\frac{1}{3}$ nouo |
| per Q. Max. | 57 12 $\frac{1}{2}$ |
| per Q. Volub. | 57 12 $\frac{1}{2}$ |
| Decl. per Arm. subt. | 23 7 $\frac{1}{6}$ |
| altero pinnac. | 23 7 |

DIE 5 JUNIJ.

| | |
|------------------------------------|---------------------|
| Alt. ☉ mer. | { 57 26 50 nouo |
| per Q. Tich. | { 57 27 0 vet. pin. |
| per Q. Max. | 57 26 40 |
| per Reg. min. 5599 $\frac{1}{2}$, | 57 28 |
| per Q. Volub. | 57 27 $\frac{1}{6}$ |
| Decl. per Arm. subt. | 23 20 $\frac{3}{4}$ |
| altero pinnac. | 23 20 $\frac{1}{2}$ |
| Repetita | 23 20 $\frac{1}{2}$ |
| alt. pinnac. | 23 20 $\frac{3}{4}$ |
| Repetita | 23 21 |
| altero pinnac. | 23 20 $\frac{1}{2}$ |

Sequitur pro obseruatione
refractionum solarium.

Eodem die P. M.

| Per maius Horologium | | Per Q. Volub. | Per Armillas subt. Declinatio ☉ | |
|-------------------------|------------------|------------------|------------------------------------|---------------------|
| H. | M. | Alt. ☉ | I pinnac. | II pinnac. |
| 1 | 41 | 53 0 | 23 21 $\frac{2}{3}$ | |
| 1 | 48 | 52 0 | 21 $\frac{2}{3}$ | |
| 2 | 15 | 49 10 | 22 | 23 21 $\frac{5}{6}$ |
| 2 | 24 $\frac{1}{6}$ | 48 0 | 22 | |
| 2 | 34 | 47 0 | 22 $\frac{1}{4}$ | |
| 2 | 42 $\frac{1}{6}$ | 46 0 | 22 $\frac{1}{5}$ | |
| 2 | 59 | 44 0 | 22 $\frac{1}{2}$ | 22 |
| 3 | 14 $\frac{1}{2}$ | 42 0 | 22 $\frac{1}{2}$ | |
| 3 | 29 $\frac{1}{2}$ | 40 0 | 22 $\frac{2}{3}$ | 22 $\frac{1}{6}$ |
| 3 | 37 | 39 0 | 22 $\frac{2}{3}$ | |
| 3 | 44 | 38 0 | 22 $\frac{3}{4}$ | |
| 3 | 51 $\frac{2}{3}$ | 37 0 | 22 $\frac{3}{5}$ | 22 $\frac{1}{6}$ |
| 3 | 59 $\frac{2}{3}$ | 36 0 | 22 $\frac{3}{4}$ | |
| 4 | 4 | 35 $\frac{1}{2}$ | 22 $\frac{3}{4}$ | |
| 4 | 6 $\frac{1}{2}$ | 35 0 | 22 $\frac{3}{4}$ | 22 $\frac{1}{4}$ |
| 4 | 27 $\frac{5}{6}$ | 32 0 | 22 $\frac{3}{4}$ | |
| 4 | 49 $\frac{1}{3}$ | 29 0 | 22 $\frac{3}{4}$ | 22 $\frac{1}{4}$ |
| 5 | 4 $\frac{1}{2}$ | 27 0 | 22 $\frac{5}{6}$ | |
| 5 | 17 $\frac{5}{6}$ | 25 0 | 22 $\frac{5}{6}$ | |
| 5 | 32 $\frac{1}{6}$ | 23 0 | 23 $\frac{1}{4}$ | 22 $\frac{1}{2}$ |
| 5 | 46 $\frac{2}{3}$ | 21 0 | 23 $\frac{1}{3}$ | |
| 5 | 54 | 20 0 | 23 $\frac{1}{2}$ | |
| 6 | 9 | 18 0 | 23 $\frac{3}{4}$ | 23 $\frac{1}{6}$ |
| 6 | 16 $\frac{1}{6}$ | 17 0 | 23 $\frac{3}{4}$ | |
| 6 | 26 | 16 0 | 24 | |
| 6 | 31 $\frac{1}{2}$ | 15 0 | 24 | 23 $\frac{2}{3}$ |
| 6 | 35 $\frac{2}{3}$ | 14 30 | 24 $\frac{1}{6}$ | |
| 6 | 39 | 14 0 | 24 $\frac{1}{3}$ | |
| 6 | 46 $\frac{2}{3}$ | 13 0 | 24 $\frac{1}{2}$ | 24 |
| 6 | 54 $\frac{1}{2}$ | 12 0 | 24 $\frac{3}{4}$ | |
| 7 | 2 $\frac{1}{2}$ | 11 0 | 25 | 24 $\frac{1}{2}$ |
| 7 | 10 $\frac{2}{3}$ | 10 0 | 25 $\frac{2}{3}$ | 25 |
| 7 | 18 $\frac{2}{3}$ | 9 0 | 26 $\frac{1}{4}$ | 25 $\frac{1}{2}$ |
| 7 | 26 $\frac{5}{6}$ | 8 0 | 26 $\frac{5}{6}$ | 26 $\frac{1}{4}$ |
| 7 | 35 $\frac{1}{3}$ | 7 0 | 27 $\frac{3}{4}$ | 27 $\frac{1}{4}$ |
| 7 | 44 $\frac{1}{6}$ | 6 0 | 28 $\frac{2}{3}$ | 28 |
| 7 | 53 | 5 0 | 29 $\frac{3}{4}$ | |
| 8 | 2 $\frac{1}{4}$ | 4 0 ¹ | .. | |
| 8 | 11 $\frac{5}{6}$ | 3 0 | 34 | |
| 8 | 21 $\frac{2}{3}$ | 2 0 | 37 | |
| 8 | 32 | 1 0 | .. | |

*Hinc colligo refractionem in ipso
Horizonte potuisse fieri 23 50 vel ad
minimum 23 47, cum declinatio fue-*

¹ Adscriptum est »Impedimenti quippiam fuit«.

rit 23 22, est refractio declinationis
28', quæ in altitudine augetur & prop-
ter parallaxin.

DIE 6 JUNIJ A. M.

| H. | M. | Altitudo ☉ | Declinatio Solis | |
|----|------------------|------------------|---------------------|---------------------|
| | | | I pinnac. | Alt. pinnac. |
| 3 | 27 | 1 0 | 23 42 $\frac{1}{4}$ | |
| 3 | 37 $\frac{1}{3}$ | 2 0 | 37 | 23 37 $\frac{1}{2}$ |
| 3 | 47 $\frac{1}{2}$ | 3 0 | 33 | |
| 3 | 57 | 4 0 | 30 | |
| 4 | 6 $\frac{1}{3}$ | 5 0 ¹ | | |
| 4 | 15 | 6 0 | 27 $\frac{2}{3}$ | |
| 4 | 23 $\frac{5}{6}$ | 7 0 | 26 $\frac{5}{6}$ | 27 |
| 4 | 32 | 8 0 | 25 $\frac{1}{2}$ | 26 |
| 4 | 40 $\frac{2}{3}$ | 9 0 | 25 $\frac{1}{6}$ | 25 $\frac{1}{2}$ |
| 4 | 48 $\frac{1}{2}$ | 10 0 | 25 | 25 $\frac{1}{3}$ |
| 4 | 56 $\frac{1}{2}$ | 11 0 | 24 $\frac{1}{2}$ | |
| 5 | 4 $\frac{2}{3}$ | 12 0 | 24 | 24 $\frac{1}{2}$ |
| 5 | 12 $\frac{2}{3}$ | 13 0 | 23 $\frac{1}{2}$ | 24 |
| 5 | 20 $\frac{1}{3}$ | 14 0 | 23 $\frac{1}{6}$ | |
| 5 | 24 | 14 30 | 23 | |
| 5 | 27 $\frac{5}{6}$ | 15 0 | 23 | 23 $\frac{2}{3}$ |
| 5 | 49 | 18 0 | 22 $\frac{1}{2}$ | 23 |
| 6 | 5 $\frac{1}{6}$ | 20 0 | 22 $\frac{1}{3}$ | |
| 6 | 41 $\frac{1}{4}$ | 25 0 | 22 | 22 $\frac{2}{3}$ |
| 6 | 55 $\frac{2}{3}$ | 27 0 | 22 | 22 $\frac{1}{2}$ |
| 7 | 10 | 29 0 | 22 | |
| 7 | 31 $\frac{1}{2}$ | 32 0 | 21 $\frac{5}{6}$ | 22 $\frac{1}{2}$ |
| 7 | 53 | 35 0 | 22 | 22 $\frac{1}{2}$ |
| 8 | 7 $\frac{1}{2}$ | 37 0 | 22 | |
| 8 | 15 $\frac{5}{6}$ | 38 0 | 22 | 22 $\frac{1}{2}$ |
| 8 | 29 $\frac{5}{6}$ | 40 0 | 21 $\frac{5}{6}$ | |
| 9 | 1 | 44 0 | 22 | 22 $\frac{2}{3}$ |
| 9 | 17 | 46 0 | 22 | |

Die eodem 6 Junij Alt. ☉ Merid.

per Q. Tich. 57 29 0

57 29 5 vet. pin.

per Q. Volub. 57 29 30

per Q. Max. 57 28 40

per Reg. min. 5598, 57 29 0

H. 11 M. 10 Decl. ☉ obseruata est

23 22 $\frac{5}{6}$

altero pinnac. 23 23 $\frac{1}{2}$

H. 11 M. 25² Repetita 23 23

altero pinnac. 23 23 $\frac{2}{3}$

Decl. obseruata { 23 23

in meridie { 23 23 $\frac{1}{2}$ alt. pin.

Post Meridiem eiusdem diej.

| H. | M. | Altitudo ☉ | Declinatio Solis | |
|----|------------------|---------------|---------------------|------------------|
| | | | I pinnac. | Alt. pinnac. |
| 5 | 11 $\frac{1}{6}$ | 26 0 | 23 25 $\frac{1}{2}$ | 23 25 |
| 5 | 18 $\frac{1}{2}$ | 25 0 | 25 $\frac{1}{2}$ | 25 |
| 5 | 32 $\frac{3}{4}$ | 23 0 | 25 $\frac{1}{2}$ | 25 $\frac{1}{6}$ |
| 5 | 47 | 22 0 | 25 $\frac{5}{6}$ | 25 $\frac{1}{2}$ |
| 6 | 2 | 19 0 | 26 | 25 $\frac{1}{2}$ |
| 6 | 16 $\frac{1}{2}$ | 17 0 | 26 $\frac{1}{2}$ | 26 $\frac{1}{4}$ |
| 6 | 41 $\frac{3}{4}$ | 15 0 | 26 $\frac{3}{4}$ | 26 $\frac{1}{2}$ |
| 6 | 47 | 13 0 | 27 | 26 $\frac{2}{3}$ |
| 6 | 54 $\frac{5}{6}$ | 12 0 | 27 | 26 $\frac{5}{6}$ |
| 7 | 2 $\frac{3}{4}$ | 11 0 | 27 $\frac{2}{3}$ | 27 $\frac{1}{2}$ |
| 7 | 10 $\frac{5}{6}$ | 10 0 | 28 $\frac{1}{2}$ | 28 |
| 7 | 18 $\frac{5}{6}$ | 9 0 | 28 $\frac{5}{6}$ | 28 $\frac{1}{4}$ |
| 7 | 27 $\frac{1}{6}$ | 8 0 | 29 | 28 $\frac{5}{6}$ |
| 7 | 35 $\frac{1}{2}$ | 7 0 | 29 $\frac{5}{6}$ | 29 $\frac{3}{4}$ |
| 7 | 44 $\frac{1}{6}$ | 6 0 | 31 | 30 $\frac{2}{3}$ |
| 7 | 53 $\frac{1}{6}$ | 5 0 | 32 | 31 $\frac{1}{2}$ |
| 8 | 2 $\frac{3}{6}$ | 4 0 | | |
| 8 | 12 $\frac{5}{6}$ | 3 0 | 35 $\frac{1}{4}$ | |
| 8 | 22 | 2 0 | 39 | |
| 8 | 32 $\frac{1}{3}$ | 1 0 | | |

DIE 7 JUNIJ A. M.

| H. | M. | Altitudo ☉ | Declinatio Solis | |
|----|------------------|---------------|------------------|---------------------|
| | | | I pinnac. | alt. pinn. |
| 4 | 52 | 11 0 | | |
| 5 | 57 $\frac{1}{3}$ | 19 0 | 23 27 | |
| 6 | 12 | 21 0 | 26 $\frac{2}{3}$ | vtroq. pin. |
| 6 | 26 $\frac{1}{3}$ | 23 0 | 26 $\frac{2}{3}$ | |
| 6 | 40 $\frac{5}{6}$ | 25 0 | 26 $\frac{1}{3}$ | 23 26 $\frac{2}{3}$ |
| 6 | 47 $\frac{5}{6}$ | 26 0 | 26 $\frac{1}{6}$ | |
| 7 | 2 $\frac{1}{2}$ | 28 0 | 26 $\frac{1}{3}$ | 26 $\frac{3}{4}$ |
| 7 | 9 $\frac{1}{2}$ | 29 0 | 27 $\frac{1}{4}$ | 27 $\frac{3}{4}$ |

DIE 9 JUNIJ A. M.

| H. | M. | Altitudo ☉ | Declinatio Solis | |
|----|------------------|---------------|------------------|---------------------|
| | | | I pinn. | alt. pinn. |
| 7 | 52 $\frac{1}{2}$ | 35 0 | 23 29 | 23 29 $\frac{1}{4}$ |
| 7 | 55 $\frac{5}{6}$ | 35 30 | 29 | |
| 8 | 3 | 36 0 | 29 | |
| 8 | 7 | 36 30 | 29 $\frac{1}{2}$ | |

Non erat fatis ferenum.

Eodem die in meridie

Alt. ☉ mer. per Q. Volub. 57 34 $\frac{1}{4}$ inter
Decl. per Arm. subterr. 23 29 {nubes

¹ Adscriptum est: »Fum. . . . vmbraē vifum abftulit«.

² In codice C: H. 10 M. 25.

DIE 12 JUNIJ A. M.

| H. | M. | Alt. ☉ | Declinatio Solis | |
|--------------------------------|----|--------|---------------------|---|
| | | | | alt. pinnac. |
| 8 | 4 | 37 0 | 23 30 $\frac{1}{3}$ | 23 31 $\frac{1}{4}$ 31 $\frac{1}{4}$ 31 |
| 8 | 8 | 37 30 | 30 $\frac{1}{6}$ | |
| 8 | 22 | 39 30 | 30 $\frac{1}{2}$ | |
| 8 | 29 | 40 30 | 30 $\frac{1}{2}$ | |
| Inter nubes | | | | |
| 11 | 45 | | 23 30 30 | 23 30 0 |
| Alt. ☉ merid. per Q. Tich. | | | | 57 35 40 |
| vel 45" ad summum, nouo tantum | | | | |
| pinnacidio. Per Q. Volub. | | | | 57 35 30 |
| Decl. per Arm. subt. | | | | 23 30 30 |
| | | | alt. pinnac. | 23 30 0 |
| Repetita Decl. | | | | 23 30 20 |
| | | | alt. pinnac. | 23 30 0 |
| Non fuit exquisite ferenum. | | | | |

Post Meridiem

| H. | M. | Alt. ☉ | Declinatio Solis | |
|----|------------------|------------------|------------------|---------------------|
| | | | I pinnac. | II pinnac. |
| 6 | 19 $\frac{1}{2}$ | 16 30 | 23 30 | 23 29 $\frac{1}{3}$ |
| 6 | 22 $\frac{5}{6}$ | 16 0 | 30 | |
| 6 | 30 $\frac{1}{2}$ | 15 0 | 30 | 29 $\frac{1}{2}$ |
| 6 | 37 $\frac{5}{6}$ | 14 0 | 30 $\frac{1}{6}$ | |
| 6 | 45 $\frac{5}{6}$ | 13 0 | 30 $\frac{1}{4}$ | |
| 6 | 50 $\frac{1}{2}$ | 12 $\frac{1}{2}$ | 30 $\frac{1}{2}$ | 30 |
| 6 | 53 $\frac{2}{3}$ | 12 0 | 30 $\frac{3}{4}$ | |
| 6 | 57 $\frac{1}{2}$ | 11 $\frac{1}{2}$ | 31 | |
| 7 | 1 $\frac{2}{3}$ | 11 0 | 31 $\frac{1}{3}$ | 30 $\frac{3}{4}$ |
| 7 | 5 $\frac{1}{2}$ | 10 $\frac{1}{2}$ | 31 $\frac{2}{3}$ | 31 |
| 7 | 9 $\frac{1}{2}$ | 10 0 | 32 | |
| 7 | 17 $\frac{2}{3}$ | 9 0 | 32 $\frac{2}{3}$ | 32 |
| 7 | 25 $\frac{5}{6}$ | 8 0 | 33 $\frac{1}{4}$ | |
| 7 | 34 $\frac{1}{2}$ | 7 0 | 33 $\frac{5}{6}$ | |
| 7 | 42 $\frac{1}{6}$ | 6 0 | 34 $\frac{5}{6}$ | 34 $\frac{1}{3}$ |
| 7 | 48 | 5 $\frac{1}{2}$ | 35 | |
| 7 | 51 $\frac{5}{6}$ | 5 0 | 35 $\frac{1}{2}$ | 35 |
| 7 | 56 $\frac{1}{2}$ | 4 30 | 36 | |
| 8 | 10 $\frac{2}{3}$ | 3 0 | 38 | |

Non erat fatis ferenum.

DIE 15 JUNIJ A. M.

| H. | M. | Alt. ☉ | Declinatio Solis | |
|----|----|--------|------------------|---------------------|
| | | | alt. pinnac. | |
| 4 | 4 | 5 0 | | |
| 4 | 22 | 7 0 | 23 35 | 23 35 $\frac{1}{4}$ |
| 4 | 38 | 9 0 | 32 | |
| 4 | 55 | 11 0 | 31 $\frac{1}{2}$ | |
| 5 | 10 | 13 0 | 30 $\frac{1}{2}$ | 31 |

| | | | | |
|---|-----------------|------|------------------|------------------|
| 5 | 26 | 15 0 | 23 30 | |
| 5 | 41 | 17 0 | | |
| 6 | 25 | 23 0 | 29 $\frac{3}{4}$ | 23 30 |
| 6 | 46 | 26 0 | 29 $\frac{1}{2}$ | |
| 7 | 1 | 28 0 | 29 | 29 $\frac{1}{2}$ |
| 7 | 15 | 30 0 | 28 $\frac{3}{4}$ | |
| 7 | 51 | 35 0 | 28 $\frac{1}{2}$ | 29 |
| 7 | 58 | 36 0 | 28 $\frac{2}{3}$ | |
| 8 | 5 $\frac{1}{2}$ | 37 0 | 28 $\frac{1}{2}$ | 29 |

In Meridie

Alt. ☉ mer. per Q. Tich. 57 33
 per Q. Volub. 57 33 $\frac{1}{2}$
 Decl. per Armill. mai. 23 28 $\frac{1}{2}$
 Non erat fatis ferenum.

P. M.

| H. | M. | Alt. ☉ | Declinatio Solis | |
|----|------------------|--------|------------------|---------------------|
| | | | alt. pinnac. | |
| 1 | 20 | 54 10 | 23 27 | 23 26 $\frac{1}{2}$ |
| 4 | 7 $\frac{2}{3}$ | 35 0 | 26 $\frac{1}{4}$ | |
| 5 | 33 $\frac{5}{6}$ | 23 0 | 26 $\frac{1}{2}$ | |
| 6 | 17 $\frac{5}{6}$ | 17 0 | 27 | 26 $\frac{1}{4}$ |
| 6 | 33 | 15 0 | 26 $\frac{5}{6}$ | 26 $\frac{1}{6}$ |
| 6 | 48 $\frac{1}{3}$ | 13 0 | 27 $\frac{1}{4}$ | 26 $\frac{1}{2}$ |
| 7 | 4 | 11 0 | 28 | 27 $\frac{1}{2}$ |
| 7 | 20 | 9 0 | 29 $\frac{1}{2}$ | 29 |
| 7 | 37 $\frac{1}{3}$ | 7 0 | 30 $\frac{1}{2}$ | 29 $\frac{2}{3}$ |
| 7 | 54 $\frac{1}{2}$ | 5 0 | 33 $\frac{1}{3}$ | |
| 8 | 13 $\frac{1}{2}$ | 3 0 | 37 | |
| 8 | 30 $\frac{1}{2}$ | 2 0 | 39 $\frac{5}{6}$ | |

DIE 20 JUNIJ.

Alt. mer. ☉ { 57 21 10 vet. pinn.
 per Q. Tichon. { 57 20 50 nouo
 Per Q. Volub. 57 21
 Per Q. Max. 57 20 35
 Decl. per Armill. subterr. ma. 23 15
 Altero pinnac. 23 15 $\frac{1}{3}$
 Erat bene ferenum.
 Eodem die P. M. cœlo mediocriter
 fereno.

| H. | M. | Azim. ☉ a mer. ad occ. | Altitudo ☉ | Declinatio ☉ |
|----|------------------|---------------------------|--------------------|---------------------|
| 7 | 12 $\frac{2}{3}$ | 118 0 | 9 25 $\frac{1}{4}$ | 23 15 $\frac{1}{2}$ |
| 7 | 17 50 | 119 0 | 8 48 | |
| 7 | 22 50 | 120 0 | 8 12 | 23 16 $\frac{1}{2}$ |
| 7 | 27 40 | 121 0 | 7 35 $\frac{1}{2}$ | non fatis certa |
| 7 | 32 30 | 122 0 | 7 1 $\frac{1}{4}$ | 23 17 $\frac{2}{3}$ |
| 7 | 37 20 | 123 0 | 6 26 | |
| 7 | 42 40 | 124 0 | 5 52 | 23 19 |
| 7 | 47 45 | 125 0 | 5 17 $\frac{2}{3}$ | |

| | | | | | | | | |
|---|----|----|-----|---|---|------------------|----|----|
| 7 | 52 | 50 | 126 | 0 | 4 | 44 | 23 | 20 |
| 7 | 57 | 45 | 127 | 0 | 4 | 11 $\frac{1}{2}$ | | |
| 8 | 2 | 40 | 128 | 0 | 3 | 41 | | |
| 8 | 12 | 30 | 130 | 0 | 2 | 40 | 23 | 25 |
| 8 | 17 | 0 | 131 | 0 | 2 | 10 | 23 | 27 |

DIE 21 JUNIJ A. M.

| H. | M. | Azim. a mer. verf. ort. | Altitud ☉ | Declinatio ☉ |
|----|------------------|----------------------------|---------------------|-----------------|
| 8 | 31 $\frac{1}{2}$ | 71 0 | 40 6 $\frac{1}{2}$ | 23 13 |
| 8 | 36 | 70 0 | 40 39 $\frac{1}{2}$ | |
| 8 | 40 | 69 0 | 41 11 $\frac{1}{6}$ | 23 13 |
| 8 | 44 $\frac{1}{6}$ | 68 0 | 41 42 $\frac{1}{4}$ | |
| 8 | 48 $\frac{1}{6}$ | 67 0 | 42 12 $\frac{1}{4}$ | 23 13 |

Eodem die Alt. ☉ merid.
per Q. Tich. 57 16 55
57 17 10 vet.
pinnac.

per Q. Max. 57 17 10
per Q. Volub. 57 17 30

Decl. merid. per Arm. max. 23 11
altero pinnac. 23 11 $\frac{1}{4}$

DIE 3 JULIJ.

Alt. ☉ mer. per Q. Tich. 56 2 vet. pin.
56 1 $\frac{5}{8}$ nouo
per Volub. 56 2
Decl. per Armill. subterr. 21 56 $\frac{3}{4}$

DIE 4 JULIJ.

Alt. ☉ mer. { 55 53 $\frac{1}{2}$ vet. pin.
per Q. Tich. { 55 53 $\frac{1}{3}$ nouo
per Q. Max. 55 53
per Q. Volub. 55 53 $\frac{1}{2}$
per Reg. min. 5875, 55 50 $\frac{3}{4}$
Decl. per Armill. subterr. 21 48
altero pinnac. 21 47 $\frac{5}{8}$

DIE 5 JULIJ.

Alt. ☉ mer. per Q. Tich. 55 44 $\frac{1}{2}$ vtroq.
per Q. Volub. 55 44 $\frac{2}{3}$
per Q. Max. 55 45 $\frac{1}{2}$
Decl. per Armill. subterr. 21 39
Non erat fatiſ ferenum.

DIE 6 JULIJ.

Alt. ☉ mer. per Q. Tich. 55 34 $\frac{1}{2}$ vtroq.
per Q. Volub. 55 34 $\frac{1}{2}$
per Q. Max. 55 35 $\frac{1}{6}$

Decl. per Armill. subterr. 21 29 $\frac{1}{2}$
21 29 $\frac{1}{3}$

DIE 7 JULIJ.

Alt. ☉ mer. { 55 25 0 vet. pin.
per Q. Tich. { 55 24 55 nouo
per Q. Volub. 55 25 15
Decl. per Armill. subterr. 21 19 45
alt. pinnac. 21 19 50
Erat bene ferenum.

DIE 14 JULIJ.

Alt. ☉ merid. { 54 5 50 veteri
per Q. Tich. { 54 5 40 nouo
pin.
per Q. Volub. 54 5 45
per Q. Max. 54 5 50
Per Reg. min. 6172, 54 4
Decl. per Arm. maio. subt. 20 0
Alt. pin. 20 0 15"

DIE 15 JULIJ.

Alt. ☉ merid. { 53 53 0 vet. pin.
per Q. Tich. { 53 52 55 nouo
per Q. Volub. 53 52 40
per Q. Max. 53 53 30
Decl. per Armill. subterr. 19 47
altero pin. 19 47 $\frac{1}{4}$

DIE 20 JULIJ.

Alt. ☉ mer. per Q. Tich. 52 44 $\frac{1}{2}$
per Q. Volub. 52 44 $\frac{1}{2}$
per Q. Max. 52 44
Decl. per Arm. subt. 18 39 $\frac{1}{2}$
altero pin. 18 39 $\frac{1}{4}$

DIE 23 JULIJ.

Alt. ☉ merid. { 51 59 55 vet. pin.
per Q. Tich. { 51 59 50 nouo
per Q. Volub. 51 59 $\frac{5}{8}$
Decl. per Armill. 17 55 vtroq.
pin.
Erat mediocriter ferenum, ſed non
exquifite.

DIE 24 JULIJ.

Alt. ☉ merid. { 51 44 25 vet. pin.
per Q. Tich. { 51 44 15 nouo
per Q. Volub. 51 44 $\frac{1}{2}$
per Q. Max. 51 43 $\frac{2}{3}$

Decl. per Armillas max. subt. 17 40
 alt. pin. 17 39 $\frac{3}{4}$
 N.B. Repetita declin. 17 39 $\frac{3}{4}$
 vtroq.

DIE 26 JULIJ.

Alt. ☉ merid. per Q. Tich. 51 12 $\frac{1}{2}$
 per Q. Volub. 51 12 $\frac{1}{2}$
 per Q. Max. 51 12 $\frac{3}{8}$
 per Sext. nou. 51 13

Decl. per Arm. subt. max. 17 7 $\frac{1}{2}$
 Non erat satis serenum.

DIE 27 JULIJ.

Alt. ☉ merid. { 50 56 $\frac{3}{8}$ vet.pin.
 per Q. Tich. { 50 56 $\frac{1}{2}$ nouo
 per Sext. nou. 50 56
 per Q. Volub. 50 56 $\frac{1}{2}$ vel $\frac{2}{3}$
 per Q. Max. 50 56 $\frac{5}{8}$

Erat mediocriter serenum.

Decl. per Armill. subtterr. 16 51 $\frac{1}{4}$
 vtroque pinnac., post rectificatum instrumentum ad perpendiculum.

DIE 4 AUGUSTI.

Alt. ☉ merid. { 48 36 $\frac{1}{4}$ vet.pin.
 per Q. Tich. { 48 36 $\frac{1}{4}$ nouo
 per Q. Max. 48 36 $\frac{1}{8}$
 per Q. Volub. 48 36 $\frac{3}{4}$
 Decl. per Armillas 14 31 $\frac{1}{2}$
 alt. pinnac. 14 31 $\frac{1}{4}$

DIE 8 AUGUSTI.

Alt. ☉ merid. { 47 20 $\frac{1}{2}$ nouo
 per Q. Tich. { 47 20 $\frac{3}{4}$ veteri
 per Q. Max. 47 20 $\frac{1}{2}$
 per Sext. nou. 47 20 $\frac{1}{4}$
 per Q. Volub. 47 20 0

Erat mediocriter serenum.

Decl. per Arm. subt. 13 15 30
 vtroque pinnac.

DIE 14 AUGUSTI.

Alt. ☉ merid. per Q. Tich. 45 20 $\frac{1}{8}$ vtro-
 per Q. Volub. 45 20 $\frac{1}{8}$ que
 per Q. Max. 45 20
 per Sext. nou. 45 20 $\frac{3}{8}$
 Decl. per Arm. subtterr. 11 15 $\frac{1}{2}$ vtro-
 que

DIE 30 AUGUSTI.

Alt. ☉ merid. per Q. Tich. 39 32 0
 per Q. Volub. 39 31 45
 Decl. per Arm. subtterr. 5 26 $\frac{1}{4}$
 alt. pinn. 5 26 $\frac{1}{2}$

DIE 31 AUGUSTI.

Alt. ☉ merid. { 39 9 nouo
 per Q. Tich. { 39 9 $\frac{1}{3}$ veteri
 per Q. Volub. 39 9
 Decl. per Arm. 5 3 $\frac{1}{2}$
 alt. pinnac. 5 3 $\frac{2}{3}$

DIE 4 SEPTEMBRIS.

Alt. ☉ merid. { 37 37 $\frac{3}{8}$ vet.pin.
 per Q. Tich. { 37 37 $\frac{1}{8}$ nouo
 per Q. Volub. 37 36 $\frac{3}{4}$ dubia
 per Sext. nou. 37 37 $\frac{1}{2}$
 per Reg. min. 8826 $\frac{1}{2}$, 37 37 $\frac{1}{8}$
 Decl. per Arm. 3 32 $\frac{1}{2}$ vtro-
 que

DIE 7 SEPTEMBRIS.

Alt. ☉ merid. per Q. Tich. 36 27 $\frac{1}{2}$ novo
 pin.
 (veteri non licuit propter nubes)
 per Q. Volub. 36 28 $\frac{1}{2}$
 per Q. Max. 36 28
 per Sext. nouum 36 28 $\frac{3}{8}$
 per Reg. min. 9004, resp. 36 30
 Decl. per Armill. subtterr. 2 22 $\frac{1}{2}$
 Non erat serenum.

DIE 11 SEPTEMBRIS.

Alt. ☉ merid. { 34 54 nouo
 per Q. Tich. { 34 54 $\frac{1}{4}$ veteri
 per Q. Volub. 34 53 $\frac{1}{2}$
 per Q. Max. 34 54 $\frac{1}{2}$
 per Sext. nouum 34 54
 Decl. per Arm. subt. 0 49 $\frac{1}{2}$ vtroq.
 pin.

DIE 12 SEPTEMBRIS.

Alt. ☉ merid. { 34 30 $\frac{3}{4}$ nouo
 per Q. Tich. { 34 31 veteri
 per Q. Volub. 34 31
 per Q. Max. 34 29 $\frac{3}{4}$
 per Sext. nouum 34 30

per Reg. min. 9310, 34 30 20
Decl. per Arm. subterr. 0 26 vtroq.
pin.

DIE 13 SEPTEMBRIS.

Alt. ☉ merid. { 34 7 nouo
per Q. Tich. { 34 7 $\frac{1}{6}$ veteri
per Q. Volub. 34 7 $\frac{1}{4}$
per Q. Max. 34 6 $\frac{1}{2}$
per Sext. nouum 34 7
per Reg. min. 9371, 34 7
Decl. per Arm. subterr. 0 2 $\frac{1}{4}$ vtroq.
pin.

DIE 21 SEPTEMBRIS.

Alt. ☉ merid. { 30 59 $\frac{1}{2}$ veteri
per Q. Tich. { 30 59 $\frac{1}{3}$ nouo
per Q. Volub. 30 59 $\frac{3}{4}$
per Q. Max. 30 59 $\frac{1}{2}$
per Sext. nouum 31 0 $\frac{1}{2}$
Decl. per Armill. subterr. 3 4 $\frac{1}{2}$
Alt. pinnac. 3 5

DIE 22 SEPTEMBRIS.

Alt. ☉ merid. { 30 36 vno
per Q. Tich. { pinnac.
per Q. Volub. 30 36
per Q. Max. 30 36 $\frac{1}{2}$
per Sext. nouum 30 36 $\frac{3}{4}$
Decl. per Armill. 3 28 $\frac{1}{2}$ vno
pinnac.
3 28 $\frac{1}{4}$ alt. pin.

DIE 24 SEPTEMBRIS.

Alt. ☉ merid. { 29 49 $\frac{1}{3}$ nouo
per Q. Tich. { 29 49 $\frac{1}{2}$ vet. pin.
per Q. Volub. 29 49 $\frac{1}{2}$
per Q. Max. 29 49 $\frac{2}{3}$
per Sext. nouum 29 49 $\frac{1}{2}$
Decl. per Arm. subterr. max. 4 15 $\frac{1}{4}$
alt. pinn. 4 15 $\frac{1}{8}$

DIE 26 SEPTEMBRIS.

Alt. ☉ merid. per Q. Volub. 29 2 45
per Q. Tich. 29 3 0 nouo
29 3 10 vet.
pin.
per Sext. nouum 29 2 30
Post rectificatas Armillas

H. 12 18' repetita Decl. ☉ 5 2 30
vtroque pinnacidio

DIE 27 SEPTEMBRIS.

Alt. ☉ merid. per Q. Tich. 28 39 40 vtro-
que pinnac.
per Q. Volub. 28 39 45
per Q. Max. 28 39 45
Decl. per Armill. max. 5 25 $\frac{1}{4}$
Non erat satis ferenum.

DIE 10 OCTOBRIS.

Alt. ☉ merid.
per Q. Tich. 23 47 30
per Q. Volub. 23 47 30
per Sext. Δ nou. 23 47 30
per Q. Max. 23 47 20
Decl. per Armill. subterr. 10 16 $\frac{1}{3}$ vtro-
que pin. Erat in ipso meridie bene
ferenum.

DIE 14 OCTOBRIS.

Alt. ☉ merid. per Q. Tich. 22 22 $\frac{3}{4}$
per Q. Volub. 22 22 $\frac{5}{8}$
per Q. Max. 22 23 $\frac{1}{8}$
per Sext. nou. 22 23 $\frac{1}{2}$
Decl. per Armill. maiores 11 42 $\frac{1}{4}$

DIE 18 OCTOBRIS.

Alt. ☉ merid. per Q. Volub. 20 59 $\frac{2}{3}$
Decl. per Armillas 13 5
alt. pinnac. 13 5 $\frac{1}{8}$

DIE 21 OCTOBRIS.

Alt. ☉ merid. { 20 0 10 nouo
per Q. Tich. { 20 0 30 vet.
pin.
per Q. Volub. 20 0 10
per Q. Max. 20 0 0
per Sext. nouum 20 0 10
Decl. per Arm. subterr. mai. 14 5 0
alt. pinnac. 14 4 40
Erat cœlum bene ferenum.

DIE 26 OCTOBRIS A. M.

H. 8 M. 44 $\frac{1}{2}$ Cum Alt. ☉ eſſet 7 $^{\circ}$ 40'
obſeruabatur ipſius Declinatio ☉ Mer-
rid. 15 34 $\frac{1}{2}$. Ergo locus ☉ viſus tam ra-
tione parallaxeos quam refractionis
fuit in 12 17 $\frac{1}{2}$ M. Ephemerides noſtræ
præbent Solem tunc in 12 30 M, ſed

refractio et parallaxis variarunt motum.

H. 9 M. 0 rursus declinatio ☉ 15 34

Altitudo ☉ G. 9 M. 10.

Alt. mer. per Q. Tich. 18 25 $\frac{5}{8}$

per Q. Volub. 18 25 $\frac{1}{2}$

per Q. Max. 18 25 $\frac{1}{4}$

H. 12 M. 3 Decl. vno pin. 15 40

alt. pin. 15 39 $\frac{1}{2}$

H. 12 M. 5 repetita Decl. 15 39 $\frac{3}{8}$

alt. pinnac. 15 39 $\frac{1}{2}$

Prouenit locus ☉ in 12 36 M idque non habita ratione refractionis aut parallaxeos.

DIE 29 OCTOBRIS A. M.

H. 8 39' 10" ☉ a Meridie ad ort. 50 22

8 40 50 pro horologio 49 56

Decl. ☉ austr.

Alt. ☉

8 50 16 28 7 25 $\frac{1}{2}$

8 55 16 28 $\frac{1}{2}$ 7 54 $\frac{2}{3}$

8 59 $\frac{1}{8}$ 16 28 $\frac{1}{2}$ 8 18 $\frac{1}{2}$

9 8 $\frac{1}{2}$ 16 29 9 10

9 11 16 29 $\frac{1}{2}$ 9 23

9 14 16 29 $\frac{3}{4}$ 9 41

9 17 $\frac{1}{2}$ 16 30 10 1 $\frac{1}{8}$

9 20 $\frac{5}{8}$ 16 30 10 16 $\frac{2}{3}$

*9 44 16 31 $\frac{1}{2}$ resp. Locus ☉
visus 15 29 M*

DIE 1 NOUEMBRIS.

*Alt. ☉ merid. { 16 40 $\frac{2}{3}$ nouo
per Q. Tich. { pin.
per Q. Volub. { 16 41 veteri
per Sext. nouum 16 41*

*Decl. per Armill. subt. max. 17 25 $\frac{1}{2}$ M.
alt. pinnac. 17 25 $\frac{1}{4}$*

Fuit apprime ferenum.

DIE 2 NOUEMBRIS.

Hora 11 55' A. M. ☉ per Armillas maiores habuit Declinationem vno pinnacido 17 41 $\frac{1}{2}$ M.

alt. pin. 17 41 $\frac{1}{4}$

*Alt. ☉ merid. { 16 24 $\frac{1}{2}$ vet. pin.
per Q. Tich. { 16 24 0 nouo*

per Q. Volub. 16 24 $\frac{1}{2}$

Decl. ☉ 17 41 $\frac{1}{2}$ fatis

bene consentit

Hora 0 6' P. M. Decl. ☉ repetita, vtroque pinnacido 17 41 $\frac{1}{2}$ M.

DIE 4 NOUEMBRIS.

Horologium in Meridie celerius ibat 17 $\frac{1}{2}$ M, qui error illi imputandus venit a Meridie diej 2, nam interea non erat correctum, quare per biduum debent tempora proportionabiliter corrigi ad hunc numerum.

*Alt. ☉ merid. { 15 52 nouo
per Q. Tich. { pin.
per Q. Volub. { 15 52 $\frac{1}{2}$ veteri
per Q. Max. 15 52 $\frac{1}{2}$
per Sext. nouum 15 52 $\frac{1}{2}$*

Decl. per Armillas maiores subt., vtroque pinn. 18 13 $\frac{1}{2}$

H. 0 M. 7 P. M. reiterata declinatio ☉ per Armill., vtroq. pin. 18 14.¹

Quod satis bene quadrat cum altitudine Meridiana per Q. Volubilem accepta, differentia saltem exilente $\frac{1}{4}$ vnus minuti.

N. B. In nouo Meridiano monstrabant Armillæ 15' ante verum Meridianum. Quare omnia tempora hactenus obseruata vno Minuto tardiora sunt debito (non tamen vbique vnus minuti est differentia, quia non semper eodem modo se habuit, imo vix vbique dimidij).²

DIE 6 NOUEMBRIS.

*Alt. ☉ merid. { 15 21 $\frac{1}{2}$ nouo
per Q. Tich. { pin.
per Q. Volub. { 15 21 $\frac{2}{3}$ vet. pin.
Decl. ☉ per Armill. 15 20 $\frac{2}{3}$
18 45 vno pin.
18 44 $\frac{1}{2}$ alt. pin.*

Erat mediocriter ferenum.

Horologium in meridie 8 minutis velocius ibat. Fuit autem in meridie proxime antecedenti correctum.

¹ Alias obseruationes declinationis Solis infra inter obseruationes lunæ inuenies. Etiam ad dies 6, 7, 23, 24 Novembris.

² Hæc verba postea in codice V. adscripsit Tycho. Defunt in codice C.

DIE 7 NOUEMBRIS.

| | | | |
|-------------------------------|---|-------------------------|----------------|
| Alt. ☉ merid. per Q. Tich. | { | 15 6 $\frac{3}{4}$ nouo | pin. veteri |
| | | 15 7 0 | |

DIE 11 NOUEMBRIS.

| | | | |
|-------------------------------|---|-------------------------------------|----------------|
| Alt. ☉ merid. per Q. Tich. | { | 14 11 $\frac{1}{4}$ nouo | pin. veteri |
| | | 14 11 $\frac{1}{3}$ | |
| | | per Q. Volub. 14 11 | |
| | | per Sext. nouum 14 10 $\frac{1}{2}$ | |

H. 12 20' Decl. ☉ vno pin. 19 55 $\frac{1}{2}$
altero pinnac. 19 55 $\frac{1}{2}$

H. 12 25' Repetita Decl. 19 55 $\frac{1}{2}$
altero pinnac. 19 55 $\frac{1}{2}$

N.B. Omnes obseruationes sequentes sunt habitæ ad Armillas versus Meridiej lineam correctiores quam prius.

DIE 13 NOUEMBRIS.

| | | | |
|-------------------------------|---|-----------------------------------|----------------|
| Alt. ☉ merid. per Q. Tich. | { | 13 45 nouo | pin. veteri |
| | | 13 45 $\frac{1}{4}$ | |
| | | per Q. Volub. 13 44 $\frac{1}{2}$ | |
| Decl. per Armill. maior. | | 20 20 $\frac{1}{2}$ | |
| | | alt. pinnac. 20 20 $\frac{3}{4}$ | |

DIE 14 NOUEMBRIS.

| | | |
|--------------------------|------------|----------------|
| Alt. ☉ mer. per Q. Tich. | 13 32½ vno | tantum pinnac. |
| per Q. Volub. | 13 32¾ | |
| per Sext. nouum | 13 32⅔ | |
| Decl. per Armillas | 20 34 | |
| alt. pinnac. | 20 33½ | |
| Non fuit satis ferenum. | | |

DIE 18 NOUEMBRIS.

| | | | |
|---------------------------|----|------------------|----|
| Alt. ☉ mer. per Q. Tich. | 12 | 47 $\frac{1}{6}$ | |
| per Q. Volub. | 12 | 47 $\frac{1}{8}$ | |
| per Sext. nouum | 12 | 47 | |
| Decl. per Armill. max. | 21 | 18 $\frac{1}{2}$ | A. |
| alt. pinnac. | 21 | 18 $\frac{1}{8}$ | |
| Erat mediocriter serenum. | | | |

DIE 23 NOUEMBRIS.

| | | | |
|-------------------------------|---|-----------------------------------|--------------|
| Alt. ☉ merid. per Q. Tich. | { | 12 0 veteri | pin. nouo |
| | | 11 59 $\frac{5}{8}$ | |
| | | per Q. Volub. 11 59 $\frac{1}{2}$ | |

| | |
|---------------------|--------------------|
| Decl. ☉ per Armill. | 22 6 $\frac{1}{4}$ |
| alt. pinnac. | 22 6 |

DIE 24 NOUEMBRIS.

| | |
|--|---------------------|
| Alt. ☉ merid. per Q. Volub. Azimutalem | 11 51 $\frac{1}{4}$ |
|--|---------------------|

| | | |
|---------------------|--|--|
| Decl. ☉ per Armill. | | maio. 22 14 $\frac{1}{2}$ |
| | | alt. pinnacid. 22 14 $\frac{1}{4}$ |
| | | Repetita decl. I pinn. 22 14 $\frac{1}{4}$ |
| | | alt. pinnac. 22 14 |

Quod satis bene conuenit cum altitudine per Q. Volubilem Azimutalem.

DIE 28 NOUEMBRIS.

| | | | |
|--------------------------|----|------------------|---------|
| Alt. ☉ mer. per Q. Tich. | 11 | 23 $\frac{1}{2}$ | |
| nouo pinnacidio | 11 | 23 | |
| per Q. Volub. | 11 | 22 $\frac{1}{3}$ | |
| per Sext. nouum | 11 | 23 $\frac{1}{3}$ | |
| Decl. per Armill. maio. | 22 | 42 $\frac{1}{2}$ | v troq. |

DIE 29 NOUEMBRIS.

| | | | |
|--------------------------|---|---|------|
| Alt. ☉ mer. per Q. Tich. | { | 11 17 vtroq. | pin. |
| | | per Q. Volub. 11 16 | |
| | | Decl. per Armill. subt. 22 48 $\frac{1}{2}$ | |
| | | alt. pinnac. 22 49 | |

Horologium in meridie 17 $\frac{1}{2}$ minutis iusto tardius ibat a meridie proximo, quo corregebatur.

DIE 1 DECEMBRIS.

| | | |
|-------------------------------|------|------------|
| Alt. ☉ merid. | { 11 | 6½vet.pin. |
| per Q. Tich. | { 11 | 6 nouo |
| per Q. Volub. | | |
| Azim. | 11 | 6¼ |
| per Sext. nouum | 11 | 6 |
| Decl. per Armill. æquat. max. | 22 | 59 |
| alt. pinnac. | 22 | 59½ |
| Erat bene serenum. | | |

DIE 2 DECEMBRIS.

| | | |
|-------------------------------------|---|---------------------------------------|
| ☉ incepit oriri H. 8 21' fere | { | Differentia in ortu 6 Minutorum |
| Medius oriebatur 8 23 $\frac{1}{2}$ | | |
| Totus ortus 8 26 $\frac{5}{8}$ | | |

Nota. Horologium in Meridie indicabat H. 11 54' 52'', cum esse deberet 12 0' 0''. Hæc autem tarditas illi eveniebat Meridie proxime antecedente.

Maximum autem horologium tunc
ponebatur exacte in H. 12 0'.

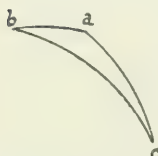
Alt. mer. per Q. Volub. 11 $1\frac{1}{6}$
per Q. Tich. 11 $1\frac{1}{2}$
per Sextantem 11 2
Decl. per Arm. max. 23 $4\frac{1}{2}$ bis
alt. pinnacid. 23 $4\frac{1}{4}$ idem

DIE 14 DECEMBRIS.

Alt. ☉ mer. per Q. Volub. Azim. 10 $40\frac{3}{4}$
Decl. per Armill. subt. max. 23 25
alt. pinnac. 23 $24\frac{3}{4}$
Alt. per Q. Tichonicum 10 $41\frac{1}{2}$
Sed nota quod non fuit satis ferenum.
Horologium in meridie verificatum.

DIE 15 DECEMBRIS.

| | | |
|---------------|------------------|--------------------|
| Min. Horol. | Azim. | Alt. centri |
| H. 11 39' 35" | centri ☉ 1 44 | 10 $40\frac{3}{4}$ |
| 11 43 35 | oc. limb. ☉ 2 49 | 10 40 |
| 11 45 45 | oc. limb. ☉ 3 19 | 10 39 |

 Quia datur AC complementum altitudinis & AB complementum Polaris altitudinis & angulus BAC complementum Azimuthi. Ergo per VI dogma datur angulus ABC distantia a meridiano in Æquatore.

DIE 16 DECEMBRIS.

| | | | |
|----------|---------|----------------------|--------------------|
| Per mi. | Per ma. | Azim. ☉ | Alt. |
| 11 50 40 | 11 57 0 | 0 51 or. | 10 45 |
| 11 54 40 | 12 1 16 | transiuit ☉ per mer. | en plati |
| 11 58 20 | 12 5 20 | 0 48 oc. | 10 $44\frac{1}{2}$ |
| 12 0 31 | 12 7 40 | 1 20 oc. | 10 43 |

Non fuit satis ferenum, ideoque centrum corporis ☉ per pinnacidium tam in Azimuthis quam in Altitudinibus obseruauimus.

DIE 27 DECEMBRIS.

11 55 25 per minus ☉ transiuit
11 50 52 per maius ☉ Merid.
☉ Declin. iuxta Meridiem
22 $30\frac{1}{4}$ nouo
22 $30\frac{1}{2}$ alt.

Horologium in Meridie sequente
mouebatur iusto tardius 4' 35", idque
ab hora 12 M. 40 antecedentis diej.

Alt. ☉ { per Volubilem 11 34
in merid. { per Muralem 11 35
Decl. ☉ vno pinnac. 22 31
reiterata altero 22 $31\frac{1}{2}$

DIE 30 DECEMBRIS.

| | | | |
|----------|----------|--------------|--------------------|
| Minus | Maius | Azim. ☉ occ. | Alt. |
| 12 18 59 | 12 14 18 | 4 1 | 11 $51\frac{1}{2}$ |
| 12 20 37 | 12 16 0 | 4 25 | 11 51 |
| 12 22 6 | 12 17 40 | 4 44 | 11 50 |
| 12 23 55 | 12 19 26 | 5 11 | 11 $48\frac{1}{2}$ |
| 12 25 39 | 12 21 13 | 5 34 | 11 $47\frac{3}{4}$ |
| 12 27 52 | 12 23 36 | 6 0 | 11 $46\frac{1}{2}$ |

In sequentibus erat bene ferenum.

| | | | |
|----------|----------|------|--------------------|
| 12 30 20 | 12 26 17 | 6 41 | 11 44 |
| 12 31 30 | 12 27 35 | 6 58 | 11 $42\frac{1}{2}$ |
| 12 32 52 | 12 29 3 | 7 17 | 11 41 |
| 12 33 55 | 12 30 6 | 7 31 | 11 $39\frac{3}{4}$ |

| | | | |
|----------|----------|-------------------|-------------------|
| | | Per Armillas | |
| | | Dist. a mer. occ. | Decl. Auf. |
| 12 36 45 | 12 33 15 | 8 $22\frac{3}{4}$ | 22 $7\frac{1}{2}$ |
| 12 38 15 | 12 34 48 | 8 48 | 22 $7\frac{1}{2}$ |
| 12 39 11 | 12 35 50 | 9 $2\frac{1}{2}$ | 22 $7\frac{1}{2}$ |

DIE 31 DECEMBRIS.

Iuxta Meridiem.

H. 11 $42\frac{1}{3}$ ' Decl. ☉ auf. 21 $59\frac{1}{2}$ vno
21 59 alt.
11 $48\frac{1}{2}$ repetita Decl. 21 $59\frac{1}{2}$ vno
21 59 alt.
11 54 repetita Decl. 21 $59\frac{1}{4}$ vno
21 $58\frac{5}{8}$ alt.

Alt. ☉ mer. { 12 7 0 nouo pin.
per Q. Tich. { 12 7 10 veteri
per Sext. nouum 12 $8\frac{3}{4}$ incerta
per Reg. min. 12578, resp. 12 4
Per Q. Volub. 12 5

Horologium in Meridie 9' 17" iusto
celerius mouebatur, idque a mane
præcedentis diej.

Repetita declin. ☉ per Armillas
paulo post Merid., vno 21 $59\frac{1}{8}$
alt. 21 $58\frac{3}{4}$

LOCA SOLIS.

| Die | Alt. ☉ obseruata | Parall. | Vera Alt. | Declin. ☉ | Long. ☉ | Ephem. noſtræ | Pruten. Mæſtl. | Alphonſ. Cypr. |
|----------|---------------------|---------|--------------|----------------------|--|------------------|-------------------|-----------------------------------|
| 9 Mart. | 33° 30' 15'' | 2' 29'' | 33° 32' 44'' | 0° 32' 46'' | 28° 37' 53'' ☾ | 28° 38' 17'' | 28 7 | 28° 54' 1'' |
| 10 — | 33 54 0 | 2 28 | 33 56 28 | 0 9 2 | 29 37 23 ☾ | 29 37 40 | 29 7 | 29 53 13 |
| 11 — | 34 18 20 | 2 28 | 34 20 48 | 0 15 18 | 0 38 20 ✓ | 0 37 2 | 0 5 | 0 51 |
| 17 — | 36 39 20 | 2 23 | 36 41 43 | 2 36 13 | 6 32 12 ✓ | 6 32 24 | 6 3 | 6 36 34 |
| 19 — | 37 26 0 | 2 21 | 37 28 21 | 3 22 51 | 8 30 2 ✓ | 8 30 34 | 8 1 0 | 8 44 19 |
| 1 Apr. | 42 22 0 | 2 12 | 42 24 12 | 8 18 42 | 21 14 21 ✓ | 21 15 3 | 20 47 | 21 26 ⁵ / ₂ |
| 12 — | 46 14 50 | 2 3 | 46 16 53 | 12 11 23 | 1 57 0 ☾ | 1 57 20 | 1 31 | |
| 13 — | 46 34 50 | 2 3 | 46 36 53 | 12 31 23 | 2 54 57 ☾ | 2 55 30 | 2 29 | 3 5 ¹ / ₂ |
| 16 — | 47 33 45 | 2 1 | 47 35 46 | 13 30 16 | 5 49 48 ☾ | 5 50 2 | 5 25 | 5 59 13 |
| 18 — | 48 12 20 | 1 59 | 48 14 19 | 14 8 49 | 7 46 22 ☾ | 7 46 9 | 7 22 | 7 55 |
| 19 — | 48 31 0 | 1 58 | 48 32 58 | 14 27 28 | 8 44 3 | 8 44 11 | 8 20 | 8 52 46 |
| 27 — | 50 52 30 | 1 53 | 50 54 23 | 16 48 53 | 16 28 0 | 16 27 22 | 17 4 11 | 16 34 7 |
| 7 Majj | 53 24 0 | 1 48 | 53 25 48 | 19 20 18 | 26 5 17 | 26 4 3 | 25 44 0 | 26 9 4 |
| 8 — | 53 37 30 | 1 46 | 53 39 16 | 19 33 46 | 27 3 4 | 27 1 35 | 26 41 | 27 6 ¹ / ₂ |
| 11 — | 54 15 20 | 1 44 | 54 17 4 | 20 11 34 | 29 53 28 | 29 54 4 | 29 34 | 29 58 31 |
| 18 — | 55 33 0 | 1 41 | 55 34 41 | 21 29 11 | 6 37 42 ♀ | 6 35 56 | 6 18 6 | 6 39 17 |
| 25 — | 56 32 0 | 1 38 | 56 33 38 | 22 28 8 | 13 17 43 | 13 16 57 | 13 1 | 13 19 3 |
| 26 — | 56 39 30 | 1 38 | 56 41 8 | 22 35 38 | 14 20 9 | 14 14 11 | | |
| 29 — | | | | | 17 9 0 | 17 5 48 | 16 51 | 17 7 15 |
| 23 Julij | 51 59 50 | 1 50 | 52 1 40 | 17 56 10 | 9 31 11 ☾ | 9 30 21 | 9 24 0 | 9 28 10 |
| 24 — | 51 44 30 | 1 51 | 51 46 21 | 17 40 51 | 10 26 8 ☾ | 10 27 47 | 10 22 | 10 25 38 |
| 27 — | 50 56 30 | 1 52 | 50 58 22 | 16 52 52 | 13 18 7 | 13 20 13 | 13 15 0 | 13 18 4 |
| | | | | | Pone hic 13 18 ¹ / ₂ | | | |
| 4 Aug. | 48 36 45 | 1 58 | 48 38 43 | 14 33 13 | 20 58 3 | 21 0 52 | 20 56 0 | 20 58 39 |
| | 48 36 20 | | 48 38 18 | 14 32 48 | 20 59 22 | | | |
| | | | | | Pone hic 20 59 | | | |
| 4 Sept. | 37 37 45 | 2 21 | 37 40 6 | 3 34 36 | 21 0 18 ♀ | 21 2 15 | 20 59 0 | 21 2 39 |
| | 37 37 20 | | 37 39 41 | 3 34 11 | 21 1 22 | | | |
| 12 — | 34 31 0 | 2 27 | 34 33 27 | 0 27 57 | 28 49 57 | 28 52 12 | | |
| 13 — | 34 7 15 | 2 28 | 34 9 43 | 0 4 13 _B | 29 49 50 | 29 51 6 | | |
| 24 — | 29 49 30 | 2 34 | 29 52 4 | 4 13 26 _M | 10 38 17 ☾ | 10 41 21 | 10 35 0 | 10 44 13 |
| 10 Oct. | 23 47 30 | 2 43 | 23 50 13 | 10 15 17 | 26 29 52 | 26 35 5 | 26 27 0 | 26 40 42 |

Oportet autem in his adhibere refractionis ſolaris rationem, ſiquidem Sol infra 30 gradum ſenſibilem admittat refractionem.

Pro loco ☉ peculiari quodam modo verificato tempore tranſitus ☉ per Meridianum ad ſtellas mane et veſperi obſeruatas, vt ſequitur.

DIE 2 DECEMBRIS.

H. 8 12' 23'' A. M. ¼ a merid.

per minus occ. 99° 19 ¹/₂'
horologium

Aſcenſ. Recta ¼ 104 0

Aſc. Recta M. C. 203 19 ¹/₂4 16 32 P. M. ☉ a Mer. occ. 14 50 ¹/₄

Aſcenſ. R. ☉ 310 17

Aſc. R. M. C. ad II tempus 325 7 ¹/₄

Aſc. R. M. C. ad I tempus 203 19 30

Differentia vtriuſque 121 47 45

Facit in tempore H. 8 7' 11''

Tempus Horol. interlapſum 8 4 9

8^H4' tardius itaque mouebatur horologium H. 0 3' 2". A priori itaque tempore proportionaliter in Meridiem accipiendo competunt tempori intermedio 1' 27".

Tempus ☉ transitus per Merid. per idem horol. minus obseruatum

H. 11 54' 52"

Adde 1 27

Tempus verum transitus ☉ per Merid. 11 56 19

Tempus I hinc auferatur 8 12 23

Temporis vera differentia 3 43 56

Respondet in æquatore 55° 59'

I Ascens. R. M. C. ex ♄ 203 19½

Ascens. R. ☉ 259 18½

Respondet locus ☉ 20 10½ x

Ephem. nostræ dant 20 11½ x

II.

Rurfus pro loco ☉ eodem die.

H. 8 6' 42" A. M. ♄ a Merid. occ. 97 53½

Ascens. R. ♄ 104 0

Ascens. R. M. C. 201 53½

4 10 23 P. M. ♀

a Merid. occ. 13 17

Asc. R. ♀ 310 17

Asc. R. M. C. II 323 34

Medium cœli ad I tempus 201 53½

Differ. Ascensionum M. C. 121 40½

Resp. tempus interlapsum 8^H 6' 42"

Tempus Horologij 8 3 41

Differ. temporis 0 3 1

Ergo Horologium interuallo 8 quasi horarum mouebatur tardius iusto 3' 1". Competunt itaque horis 3 48½ a prima obseruatione in Meridiem proportionaliter 1' 24" addenda tempori transitus ☉ per meridianum, quod erat H. 11 54' 52".

Verum tempus transitus ☉ 11^H 56' 16"

Aufer primum tempus 8 6 42

Differ. vera temporis 3 49 34

Respondet in æquatore 57° 23' 30"

Asc. R. M. C. I 201 53 30

Prouenit Asc. R. ☉ 259 17 0

Cui respondet locus ☉ 20 9 x

III.

H. 7 59' 35" A. M. ♄ occ. 96° 5'

Asc. R. ♄ 104 0

Prima Asc. R. M. C. 200 5

3 40 42 P. M. ♀ occ. 5 48½

Asc. R. ♀ 310 17 0

Secunda Asc. R. M. C. 316 5 40

M. C. ad primum

tempus 200 5 0

Differ. Ascensionum

M. C. 116 0 40

Respondet in tempore 7^H 44' 10"

Tempus Horol. inter-

lapsum 7 41 7

Horis ergo 7 44' Horol.

tardius 0 3 3

Ergo tempori a I obseruatione in Meridiem com-

petunt 1 33

Tempus transitus ☉ obl. 11 54 52

Verum tempus transitus 11 56 25

Subtrahe I tempus 7 59 35

Diff. temporis 3 56 50

Respondet in æquatore 59° 12' 30"

A. M. prima Asc. M. C. 200 5 0

Ascens. R. ☉ 259 17 30

Respondet locus Solis 20 9½ x

III.

H. 8 1' 52" A. M.

♄ a Mer. occ. 96° 39'

Ascens. R. ♄ 104 0

Ascens. M. C. I 200 39

3 45 32 P. M.

♀ a Mer. occ. 7 2½

Asc. R. ♀ 310 17

II Ascens. M. C. 317 19½

I Asc. M. C. 200 39

Diff. Asc. M. C. 116 40½

Facit in tempore 7^H 46' 41"

Tempus per horol. 7 43 40

Horologium tardius 0 3 1

In horis 7 47', ergo proportionaliter tempori a pri-

ma obseruatione in Merid. competunt 1 32

Tempus transitus ☉ per me-

ridianum obseruatum 11 54 52

Verum tempus transitus 11 56 24

| | |
|-----------------------|----------------------|
| Aufer primum tempus | 8 1 52 |
| Differentia temporis | 3 54 32 |
| Respondet in æquatore | 58°38' 0'' |
| Ascensio I M. C. | 200 39 0 |
| Ascensio R. ☉ | 259 17 0 |
| Respondet locus ☉ in | 20 9 $\frac{1}{6}$ ✕ |

V.

| | |
|---|-------------------------|
| H. 8 4' 27'' A. M. | |
| ☿ a Merid. occ. | 97 19 $\frac{1}{2}$ |
| Ascens. R. ☿ | 104 0 |
| Ascens. R. M. C. | 201 19 $\frac{1}{2}$ |
| 3 49 5 P. M. ♀ occ. a Mer. | 7 57 $\frac{1}{3}$ |
| Ascens. R. ♀ | 310 17 |
| P. M. Asc. R. M. C. | 318 14 $\frac{1}{3}$ |
| A. M. Asc. R. M. C. | 201 19 $\frac{1}{2}$ |
| Diff. Asc. M. C. | 116 54 50 |
| Respondet in tempore | 7 ^H 47' 40'' |
| Tempus interlapsum ex | |
| horologio | 7 44 38 |
| Differentia temporis | 0 3 2 |
| in H. 4 48'. Ergo proportionaliter tempori a prima obseruatione in Merid. competunt | 1 31 |
| Tempus transitus ☉ obl. | 11 54 52 |
| Verum tempus transitus | 11 56 23 |
| Subtrahe I tempus | 8 4 27 |
| Differentia temporis | 3 51 56 |
| Respondet in æquatore | 57°59' 0'' |
| M. C. I | 201 19 30 |
| Ascens. R. ☉ | 259 18 30 |
| Respondet locus ☉ in | 20 11 ✕ |

VI.

| | |
|---|------------------------|
| H. 8 10' 55'' ☿ occ. a Mer. | 98 56 $\frac{1}{2}$ |
| Asc. R. ☿ | 104 0 |
| Ascens. I M. C. | 202 56 $\frac{1}{2}$ |
| 3 58 55 P. M. ♀ occid. | |
| a Mer. | 10 24 $\frac{1}{2}$ |
| Ascens. R. ♀ | 310 17 |
| Ascens. P. M. M. C. | 320 41 $\frac{1}{2}$ |
| Differentia Asc. M. C. | 117 45 0 |
| Respondet in tempore | 7 ^H 51' 0'' |
| Ex horologio | 7 48 0 |
| Diff. temporis in H. 7 51'' | 3 0 |
| Ergo proportionaliter temporis a prima obseruatione in Meridiem competunt | 1 28 |

¹ Codex C. habet 38''.

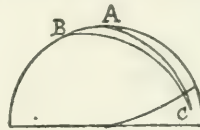
| | |
|----------------------------|-------------|
| Tempus transitus ☉ obseru. | 11 54 52 |
| Verum tempus transitus | 11 56 20 |
| Subtrahe I tempus | 8 10 55 |
| Differentia | 3 45 25 |
| Faciunt in æquatore | 56°21' 15'' |
| M. C. I | 202 56 30 |
| Ascensio R. ☉ | 259 17 45 |
| Respondet locus ☉ | 20 10 ✕ |

DIE 16 DECEMBRIS.

Simili progreßu iuxta obseruationes superius annotatas locus ☉ aliquoties inuestigabatur.

H. 11 54' 40'' transiit ☉ per meridianum, sed quia ☉ tum temporis circa meridianum etiam obseruabatur in Azimuthis, igitur et hoc tempus ☉ examinemus.

H. 11 50' 40'' Azim. ☉ or. 0°51', Alt. 10°45'



| | |
|---------------------------------------|------------------------|
| Latus BA | 34 5 30 |
| CA | 79 15 0 |
| Ang. CAB | 179 9 0 |
| Hinc BC | 113 20 6 |
| Ang. ABC, ☉ a mer. in æquat. | 0 55 23 |
| Respondet in tempore | 0 ^H 3' 41'' |
| Tempus obseruat. | 11 50 40 |
| Tempus transitus ☉ | 11 54 21 |
| Hæc obseruatio non fuit satis exacta. | |
| H. 11 58 20 Azim. ☉ occ. 0°48', | |

| | |
|---|------------------------|
| Alt. 10°44 $\frac{1}{2}$ ' | |
| Latus BA | 34 5 30 |
| CA | 79 15 30 |
| Ang. CAB | 179 12 0 |
| BC | 113 20 48 |
| Ang. ABC | 0 51 15 |
| Respondet in tempore | 0 ^H 3' 24'' |
| Tempus obseruat. | 11 58 20 |
| Tempus transitus ☉ | H. 11 54 56 |
| H. 12 0 31' Azim. occ. 1°20', Alt. 10°43' | |
| Latus BA | 34 5 30 |
| CA | 79 17 0 |
| BAC | 178 40 0 |
| BC | 113 21 56 |
| Diff. ☉ a mer., | ABC 1 26 15 |
| Respondet in tempore | H. 0 5' 44'' |
| Tempus obseruat. | 12 0 31 |
| Tempus transitus | 11 54 47 |

Retineatur itaque tempus transitus
per meridianum prout obseruabatur
H. 11 54' 40".

Pro Ascensione Recta ☉.

I.

| | |
|--------------------------------------|------------------------|
| H. 6 29' 50" A. M. Spica ♄ | |
| a merid. or. | 2 50 |
| Afc. R. Spicæ | 195 54 |
| Afc. R. M. C. | 193 4 |
| 3 58 0 P. M. | |
| ☉ a Merid. occ. | 11 22 $\frac{1}{2}$ |
| Afc. R. ☉ | 324 44 $\frac{1}{2}$ |
| II M. C. | 336 7 0 |
| Differentia Ascens. | 143 3 |
| Tempus proueniens ex differ. | |
| Afc. R. M. C. | 9 ^h 32' 12" |
| Tempus ex horologio | |
| interlapsum | 9 28 10 |
| Differentia temporis | 0 4 2 |
| Tempus meridiej H. 11 54' 40" | |
| I tempus | 6 29 50 |
| H. 9 32' dant 4' 22", quantum | 5 24 50, |
| resp. 2' 18" proportionaliter. | |
| Verum transitus tempus H. 11 56' 58" | |
| Tempus I | 6 29 50 |
| Differentia vera temporis | 5 27 8 |
| Respondet in æquatore | 81° 47' 0" |
| I Afc. R. M. C. | 193 4 |
| Afc. R. ☉ | 274 51 0 |
| Locus ☉ | 4 27 1 $\frac{1}{2}$ |
| Ephemerides nostræ dant | 4 29 57 $\frac{1}{2}$ |

II.

| | |
|--------------------------------------|------------------------|
| H. 6 34' 59" Spica ♄ or. | 1° 25' |
| Afc. R. Spicæ | 195 54 |
| Afc. R. M. C. | 194 29 |
| 4 0 8 ☉ occ. | 11 58 $\frac{3}{4}$ |
| Afc. R. ☉ | 324 44 |
| II M. C. | 336 42 $\frac{3}{4}$ |
| Differ. Afc. M. C. | 142 13 45 |
| Respondet in tempore | 9 ^h 28' 55" |
| Tempus Horol. interlapsum | 9 25 9 |
| Differentia temporis | 3 46 |
| H. 9 29' dant 3' 46", | |
| quantum H. 5 20', resp. 2' 7" | |
| Transitus ☉ per Merid. H. 11 54' 40" | |
| Adde | 2 7 |

| | |
|-----------------------|--------------------|
| Verum tempus | 11 56 47 |
| I tempus | 6 34 59 |
| Differentia | 5 21 48 |
| Respondet in æquatore | 80° 26' 15" |
| I M. C. | 194 29 0 |
| Afc. R. ☉ | 274 55 15 |
| Locus ☉ | 4 31 $\frac{1}{2}$ |

III.

| | |
|--------------------------------------|----------------------------------|
| H. 7 34' 6" Arcturus per meridianum. | |
| Afc. R. Arcturi | 209 15 $\frac{1}{2}$ M. C. |
| 4 0 8 ☉ occ. | 11 58 $\frac{3}{4}$ |
| Afc. R. ☉ | 324 44 |
| II M. C. | 336 42 $\frac{3}{4}$ |
| Differ. Afc. M. C. | 127 27 25 |
| Respondet tempus | H. 8 29 48 |
| Tempus horol. interlapsum | 8 26 2 |
| H. 8 30' dant 3' 46", | |
| quantum H. 4 20 $\frac{1}{2}$ | |
| Respondent proportionaliter | 1' 55" |
| Tempus transitus ☉ | 11 54 40 |
| Verum tempus | 11 56 35 |
| Tempus transf. Arcturi | 7 34 6 |
| Differentia vera | 4 22 29 |
| Respondet in æquatore | 65° 37' 15" |
| Afc. R. Arcturi | 209 15 $\frac{1}{2}$ |
| Afc. R. ☉ | 274 52 35 |
| Locus ☉ | 4 28 $\frac{1}{2}$ $\frac{1}{2}$ |

III.

| | |
|---------------------------------------|-----------------------|
| H. 7 34' 6" A. M. Arcturus per Merid. | |
| M. C. | 209 15 $\frac{1}{2}$ |
| 4 1 27 P. M. ☉ occ. | 12 18 $\frac{1}{8}$ |
| Afc. R. ☉ | 324 44 |
| II M. C. | 337 2 $\frac{1}{8}$ |
| Differentia Afc. | 127 47 |
| Respondet in tempore | H. 8 31 8 |
| Tempus Horol. interlapsum | 8 27 21 |
| Differ. temporis | 3 47 |
| H. 8 31' dant 3' 47", | |
| quantum H. 4 20 34 | |
| Resp. proportionaliter | 1 55 |
| Tempus transf. obseruat. | 11 54 40 |
| Verum tempus | 11 56 35 |
| Subtrahe I tempus | 7 34 6 |
| Differentia temporis | 4 22 29 |
| Resp. in æquatore | 65° 37' 15" |
| Afc. R. Arcturi | 209 15 20 |
| Afc. R. ☉ | 274 52 35 |
| Locus ☉ | 4 28 28 $\frac{1}{2}$ |

V.

| | |
|---------------------------|------------------------|
| H 7 50' 8" A. M. Arcturus | |
| | occ. 4 6 $\frac{1}{4}$ |
| Afc. R. | 209 15 |
| M. C. | 213 21 $\frac{1}{4}$ |
| 3 58 0 P. M. ♀ occ. | 11 22 $\frac{1}{2}$ |
| Afc. R. ♀ | 324 44 |
| M. C. II | 336 6 $\frac{1}{2}$ |
| Diff. Afc. M. C. | 122 45 $\frac{1}{4}$ |
| Resp. tempus interm. | H. 8 11 1 |
| Horologij tempus | 8 7 52 |

| | |
|-----------------------------|-------------|
| Horologium tardius | 3 9 |
| in H. 8 11', resp. proport. | 1 35 |
| Tempus transitus ☉ | 11 54 40 |
| Verum tempus transf. | 11 56 15 |
| Tempus I | 7 50 8 |
| Differentia | 4 6 7 |
| Resp. in æquatore | 61° 31' 45" |
| I M. C. | 213 21 15 |
| Afc. R. ☉ | 274 53 0 |
| Resp. Locus ☉ | 4 29 7 |

OBSERVATIONES LUNÆ.

DIE 21 JANUARIJ.

| | | | |
|------------------------------------|---------------------------------------|---------------------|---|
| Luna in 90 G. H. 8 M. 58. | | | |
| Per Armillas subt. maiores | | | |
| H.8M.41 $\frac{1}{6}$ | Decl. super. cornu ☾ | 18 | 53 $\frac{1}{2}$ |
| 8 | 43 $\frac{3}{4}$ Decl. infer. cornu ☾ | 18 | 20 $\frac{1}{4}$ |
| Diameter ☾ | | 0 | 33 $\frac{1}{4}$ 1 |
| ☿ occid. Occ. limb. ☾ Dist. æquat. | | | |
| 8 | 51 $\frac{1}{2}$ | 27 37 $\frac{1}{2}$ | 0 51 $\frac{1}{2}$ or. 28 29 0 |
| 8 | 54 $\frac{3}{4}$ | 28 24 $\frac{1}{4}$ | 0 5 or. 28 29 $\frac{1}{4}$ |
| 8 | 56 $\frac{1}{3}$ | 28 56 | 0 23 $\frac{1}{2}$ occ. 28 32 $\frac{1}{2}$ |
| 9 | 0 Decl. infer. cor ☾ | | 18 20 $\frac{1}{4}$ |
| | Decl. super. cor. ☾ | | 18 54 $\frac{1}{2}$ |
| | Diameter ☾ | | 0 34 $\frac{1}{4}$ |
| Deinde ☾ ab oculo ☿. | | | |
| Aldeb. Occ. limb. Dist. æquat. | | | |
| occ. ☾ occ. | | | |
| 9 | 4 | 27 13 | 2 20 $\frac{1}{4}$ 24 52 $\frac{3}{4}$ |
| 9 | 5 $\frac{1}{2}$ | 27 37 $\frac{1}{4}$ | 2 44 $\frac{1}{4}$ 24 53 0 |
| 9 | 7 | 28 0 $\frac{1}{6}$ | 3 5 $\frac{1}{4}$ 24 54 55 |
| 9 | 9 | Decl. inf. cornu ☾ | 18 20 $\frac{1}{8}$ |
| 9 | 10 $\frac{2}{3}$ | Decl. sup. cornu ☾ | 18 53 $\frac{1}{2}$ |
| | Diameter ☾ | | 0 33 $\frac{1}{6}$ |

☾ cum eſet in meridiano habuit inferior limbis Altit. 52 25

Pro inueniendo autem loco Lunæ ex diſtantijs æquatorijs eius a ☿, factæ ſunt deinde hæ ſequentes ☿ obſervationes per Armillas ſubterraneas.

| | | |
|---|---------------------------|--------------------|
| ☿ occid. | Cor ☿ orient. | Diff. æquat. |
| 9 41 | 39 50 47 17 $\frac{3}{4}$ | 87 7 $\frac{3}{4}$ |
| 9 43 $\frac{1}{2}$ | 40 23 46 44 $\frac{1}{2}$ | 87 7 $\frac{1}{2}$ |
| 9 45 $\frac{1}{2}$ | 40 57 46 10 $\frac{1}{4}$ | 87 7 $\frac{1}{4}$ |
| 9 48 Decl. ☿ per Armill. 19 | 54 $\frac{3}{4}$ Bor. | |
| Cum vero eſet ☿ in meridiano Altitudo per Muralem | 54 0 | |
| Alt. æquat. | 34 5 30 | |
| Declin. ☿ | 19 54 30 | |

Inquiratur hinc locus ☿ ponendo ad horam 9 $\frac{3}{4}$ ipſius differentiam Aſc. a corde ☾ 87 7 $\frac{1}{2}$ et Declinationem boream 19 54 $\frac{1}{2}$, vt conſtet locus ☿ non longe a ſtatione exiſtentis. Sed cordis ☾ Aſcenſio Recta verificetur ex Aſc. recta oculi ☿ hoc anno 63 5, vt conueniat ratione diſtantiæ.

Deinde ex ☿ Aſc. recta et Declinatione inquiratur ☾ Aſcenſio Recta & long. latitudoque præſupponendo H. 8 M. 56 $\frac{3}{4}$ vel verificando tempus per Aſc. R. ☿ & diſtantiā a meridiano, diſtantiā æquatoriam 28 32 & addendo quantum 17' pro ſemidiametro ☾ faciunt in eo ſitu in Aſcen. recta.

Declinatio ☾ aſumatur quoad centrum 18° 37'. Idem fiat H. 9 M. 5 veri-

¹ Adſcriptum eſt in codice V: » ☾ in Meridiano 52° 25' per Q. Tichon. puto quo ad inferiorem limbum: id enim non erat adſcriptum ut nec tempus«.

ficando tempus per Aldebor. & accipiendo differ. Asc. R. 24 53.

DIE 22 JANUARIJ.

H. 10 M. 22 ☾ in 90 G.

☾ *obseruetur aliquoties* $\frac{1}{2}$ *hora ante 90 gradum & $\frac{1}{2}$ post ad summum, partim a corde ☾ partim ab oculo ☾ prout fuerit commodius, & declinatio ipsius accipiat interea ter vel quater per vtraque cornua & annotetur tam stellæ quam ☾ distantia a meridiano.*

H. 7 M. 11 $\frac{1}{3}$ Aldeboram per meridianum.

Infer. cornu ☾ 51 12 $\frac{1}{2}$ } Per Q. Tichon.
Super. cornu ☾ 51 51 $\frac{1}{2}$ }

Diam. ☾ 39 0 *nimis magna*

H. 9 55 $\frac{1}{2}$ Decl. infer. limbi ☾ 17 9

9 57 Decl. super. limbi ☾ 17 45

Diameter ☾ 0 36

| | Oculus ☾ occ. | Occ. limb. ☾ occid. | Dift. æquat. |
|---------------------|---------------------|------------------------|--------------------|
| 10 0 40 | 42 30 | 2 4 | 40 26 |
| 10 2 10 | 42 53 | 2 25 | 40 28 |
| 10 3 40 | 43 14 $\frac{1}{2}$ | 2 44 $\frac{1}{2}$ | 40 30 |
| 10 6 | 43 52 | 3 20 | 40 32 |
| 10 7 $\frac{1}{2}$ | 44 12 | 3 39 | 40 33 |
| 10 10 $\frac{2}{3}$ | Decl. inf. limbi | | 17 8 $\frac{1}{2}$ |
| 10 13 $\frac{2}{3}$ | Decl. super. limbi | | 17 44 |
| | Diameter ☾ | | 0 35 $\frac{1}{2}$ |

Horologij circa horam 8 correcti hucusque nullus error.

| | ☾ occid. | Occ. limb. ☾ ad occ. | Dift. æquat. |
|---------------------|--------------------|-------------------------|---------------------|
| 10 25 $\frac{5}{6}$ | 52 27 | 8 6 $\frac{1}{2}$ | 44 20 $\frac{1}{2}$ |
| 10 27 | 52 46 | 8 24 $\frac{1}{4}$ | 44 21 $\frac{3}{4}$ |
| 10 29 | 53 15 | 8 52 | 44 23 |
| 10 31 $\frac{2}{3}$ | Decl. inf. cornu ☾ | | 17 5 |
| | Decl. super. limbi | | 17 42 $\frac{1}{4}$ |
| | Diameter ☾ | | 0 37 $\frac{1}{4}$ |

¹ Adscriptum est: Respondet 10^H 20 $\frac{1}{3}$ $\frac{1}{4}$.

² Sic in codice C.

³ Sic in codice C; 39 $\frac{5}{12}$ præbet V.

DIE 23 JANUARIJ.

☾ tranfit per 90 G. H. 11 M. 52.

| | ☾ occ. | Cor ☾ orient. | Dift. æquat. |
|----------------------------|---------------------|---------------------|---------------------------------|
| H. 11 M. 23 $\frac{3}{8}$ | 8 6 $\frac{1}{2}$ | 18 57 | 27 3 $\frac{1}{2}$ |
| 11 26 $\frac{3}{8}$ | 8 49 | 18 12 $\frac{5}{8}$ | 27 1 $\frac{5}{8}$ |
| 11 29 $\frac{1}{2}$ | 9 24 $\frac{5}{8}$ | 17 35 $\frac{1}{4}$ | 27 0 $\frac{1}{8}$ ² |
| 11 32 $\frac{1}{2}$ | 10 12 $\frac{3}{4}$ | 16 44 $\frac{2}{8}$ | 26 57 $\frac{2}{8}$ |
| 11 38 Declin. infer. limbi | | | |

vno 14 30 $\frac{1}{2}$

11 39 $\frac{1}{2}$ altero pinnacidio 14 31 $\frac{1}{2}$

| | Oculus ☾ | ☾ occ. | Dift. æquat. |
|-----------------------------------|---------------------|---------------------|---------------------|
| 11 52 $\frac{1}{8}$ | 71 45 | 15 5 $\frac{1}{4}$ | 56 39 $\frac{3}{4}$ |
| 11 55 $\frac{2}{8}$ | 72 32 $\frac{1}{8}$ | 15 51 $\frac{2}{8}$ | 56 40 $\frac{1}{2}$ |
| 11 59 $\frac{5}{8}$ | 73 25 $\frac{1}{2}$ | 16 45 | 56 40 $\frac{1}{2}$ |
| 12 2 $\frac{1}{2}$ | 74 12 $\frac{1}{2}$ | 17 31 | 56 41 $\frac{1}{2}$ |
| 12 6 Decl. sup. limbi ☾ | | | 15 5 $\frac{5}{8}$ |
| 12 6 $\frac{5}{8}$ altero pinnac. | | | 15 6 $\frac{1}{2}$ |

DIE 3 FEBRUARIJ.

De ☾ *pro ipsius parallaxi habenda.*

Februarij die 3 cum ☾ Meridiano appropinquaret & eBet non longe a Tropico ☿ in 26 videlicet ☿ vel circiter, inquisiui eius declinationem tam

per Armillas maiores quam per altitudinem beneficio muralis & Sextantum, idque in hunc modum.
H. 7 M. 34 Fuit declin.

| | | |
|----------------------------|--------------|-------|
| | super. cornu | 19 49 |
| 7 36 Declin. infer. cornu | 20 18 | |
| Alt. sup. Gr. 14, diameter | | |
| | apparens | 29 |
| Ergo declin. centri erat | 20 3 | |
| 7 43 superius cornu | 19 49 | |
| 7 45 Declin. infer. | 20 17 | |
| Diameter apparens | 0 28 | |
| Declin. centri | 20 3 | |

Cum vero ¶ eſet quaſi in Merid. fuit ſuperius cornu 19 48, inferius 20 15, differ. M. 27. Ergo declin. centri 20 1½. Fuit hoc iuxta horam 7 56.

Atque eodem modo circa horam 8 M. 2 inueni ſuperius cornu 19 48½
20 15

Diameter 26½

Declinatio centri 20 1½ vt prius.

Sic etiam per vtrumque Sextantem accepta eſt ¶ cum in Merid. eſet

| | |
|-------------------------|--------|
| Alt. in ſuperiori cornu | 14 19 |
| in inferiori | 13 53 |
| diff. eſt diameter viſa | 26 |
| Altitudo centri | 14 6 |
| Declin. per Sextantes | 19 59½ |

Per Muralem Alt.

| | |
|--------------|-------|
| super. cornu | 14 22 |
| inferioris | 13 52 |
| Diameter | 30 |

Fuit itaque Alt. centri

iuxta Muralem 14 7

& ob id Declin. Lunæ 19 58 30

Collatis ſingulis erit declinatio in Meridiano ex Altitudine accepta 19 59

Sed per Armillas magnas obſervabatur eadem declinatio circa Meridianum 20 1½. Quapropter ſi loco veriſimæ declinationis tunc cum ¶ per Meridianum tranſibat acceperimus exacte 20 0, inſenſibiliter ab ipſo ſcopo aberrabimus in parallaxi Lunæ perveſtiganda adhibito ipſius vero loco ſecundum longitudinem & latitudinem. Varietatem vero hanc inter obſervandum per diuerſa in-

ſtrumenta peperit tenuitas ¶ præſertim iuxta cornua, quæ vix diſcerni poterant, ideoque minor ipſius diameter apparuit quam reuera erat. Fuit enim dies & Sol ortus erat, nec exquisitiſſime ſerenum circa locum ¶ ob propinquitatem horizontalem. Eſt tamen mediocriter bona obſervatio.

DIE 23 SEPTEMBRIS A. M.

¶ peruenit ad 90 Gr. ab Aſcendente H. 3 M. 7 A. M.

H. 2 58' A. M. vel poſt M. N.

per Armillas maiores ſubt.

| | |
|--------------------------|----------|
| Declin. ſuper. cornu ¶ | 17 18 B. |
| altero pinnac. | 17 17½ |
| 3 7 Declin. ſuper. cornu | 17 18½ |
| inferioris cornu | 16 45 |
| Diameter ¶ | 0 33½ |
| Semidiameter | 0 16½ |
| Reſp. in æquatore | 0 17½ |

| | Luc. ¶ occ. | Or. limb. ¶ ad ort. | Diſt. æquat. |
|---|-------------|---------------------|--------------|
| 3 11½ | 30 28½ | 10 11 | 40 39½ |
| 3 16½ | 31 45 | 8 55 | 40 40 |
| 3 18 | 32 14¾ | 8 27 | 40 41¾ |
| 3 20½ | 32 47½ | 7 55 | 40 42½ |
| 3 22½ | 33 10½ | 7 32½ | 40 43 |
| 3 25½ | 33 52½ | 6 52½ | 40 44¾ |
| 3 27½ Decl. inf. cornu | | | 16 45¾ |
| ſuper. cornu | | | 17 19 |
| Diameter ¶ | | | 0 33¾ |
| 3 34½ Diſt. inter inferius caput ¶ & orient. limb. ¶ per Sext. Δ vet. | 41 9¾ | | |
| 3 36½ Diſt. eadem II | 41 9½ | | |
| 3 39 Eadem III | 41 9½ | | |
| 3 50 Decl. ſuper. cornu ¶ | 17 20½ | | |
| Inferioris cornu | 16 47½ | | |
| Diam. ¶ app. | 0 33 0 | | |
| 3 53 fuit orient. limb. ¶ in Merid. & habuit ſuperius cornu altit. | 51 25½ | | |

inferius cornu

per Q. Volub. 50 51½

Diameter ¶ 0 34

Inquiſitio loci ¶.

| | |
|----------------------------|--------|
| H. 3½ Decl. ſuper. cornu ¶ | 17 18½ |
| Subtr. ſemid. | 17 |
| Declinatio centri ¶ | 17 1½ |

Diff. Asc. orient. limbi ☾

a lucida √ 40 39½

Asc. R. Lucidæ √ 26 2½

Asc. R. or. limbi ☾ 66 42

Subtrahe semid. 17½

Asc. R. centri ☾ 66 24½

Resp. Longitudo ☾ 7 25 II

Latitudo 4 39½ M.

Collatio inventi loci cum calculo Alphonfino et Coperniano.

| ☾ | Ex observatione | Calc. | |
|-------|----------------------------|----------|---------|
| | | Alphonf. | Copern. |
| H. 3½ | Long. 7 25 II | 7 10 II | 6 49 II |
| | Lat. 4 39½ M. ¹ | 3 48 M. | 3 50 M. |

DIE 24 SEPTEMBRIS A. M.

☾ in 90 G. H. 4 M. 23 A. M.

H. 4 8' Declin. super.

cornu ☾ 18 8

inferioris cornu 17 37

Diameter ☾ 0 31

| | Luc. √ occ. | Orient. limb. ☾ ad ort. | Diff. æquat. |
|------|-------------|----------------------------|-----------------|
| 4 15 | 47 1 | 7 12 | 54 13 |
| 4 18 | 47 48 | 6 26½ | 54 14½ |
| 4 20 | 48 14¾ | 6 0 | 54 14¾ |

Oculus ☿ occid.

| | | | |
|------|--------|-------|--------|
| 4 23 | 11 57½ | 5 13¾ | 17 11¼ |
| 4 25 | 12 27⅙ | 4 45½ | 17 12⅔ |
| 4 27 | 13 1½ | 4 11¼ | 17 12¾ |
| 4 29 | 13 23½ | 3 50½ | 17 14 |

4 32 repetita declinatio

superioris cornu ☾ 18 8

inferioris cornu 17 37¼

Diameter ☾ 0 30¾

4 46 Alt. merid. sup. cornu 52 15

infer. cornu 51 45

Diameter ☾ 0 30

Deinde de die ☉ & ☾ obseruauimus.

9 35 Decl. super. cornu ☾ 18 3½ B.

9 36 Eadem 18 5

9 38 Eadem 18 3½

per Armillas maiores subterraneas.

Potes vti 18° 4' B insensibiliter.

Altitudo supremæ circumferentiæ

Lunæ fuit iuxta has obseruationes 25 partium.

| | Orient. limb. ☾ ad occ. | Centrum ☉ orient. | Diff. æquat. | |
|------|----------------------------|----------------------|-----------------|--------|
| 9 47 | 73 54½ | 33 14 | 107 8½ | } Bonæ |
| 9 50 | 74 30 | 32 37 | 107 7 | |
| 9 52 | 74 56½ | 32 9½ | 107 6 | |

Altitudo superioris limbi ☾ iuxta has obseruationes 23 partium & ☉^{is} fuit fere eadem.

9 55 Decl. super. limbi ☾ 18 6

9 56½ Eadem 18 6

9 57¾ Eadem 18 5½

Alt. super. limbi ☾ circa has obseruationes fuit quasi 22½ g.

| | ☾ occid. | Centrum ☉ orient. | Diff. æquat. | |
|-------|----------|----------------------|-----------------|-------|
| 10 0 | 76 57 | 30 6 | 107 3 | |
| 10 2 | 77 25 | 29 36 | 107 1 me- | |
| 10 4 | 77 52½ | 29 8 | 107 0½ | lior |
| 10 6 | 78 23 | 28 37½ | 107 0½ | fatis |
| 10 7½ | 78 47½ | 28 11½ | 106 59 | bonæ |

Altitudo inferioris cornu ☾ erat iuxta medium harum obseruationum 20½°, ☉ vero 25½.

H. 10 14' Repet. declin.

sup. cor. 18 5

10 15½ Eadem 18 4½

10 17 Eadem, bona 18 5

Altitudo superioris cornu ☾ iuxta medium harum obseruationum 19½°.

N. B. Tempora præcedentium obseruationum sunt correctæ. Vbique in distantia æquatoria accepta est orientalis limbus ☾ Soli proximus, in declinatione vero suprema circumferentia.

Nota. Hæ obseruationes in ☾ sunt fatis bonæ, nec Luna longe aberat a remotione maxima, per vtrumque Epicyclum causata, fuitque apprime ferenum. Ipsemet præsens obseruabam² vna cum Gellio, & erant ambo Luminaria tam alta supra Horizontem, vt nulla sensibilis refractio insinuari potuerit. Tempora vero annotata sunt verificata ad ☉; si exactiora

¹ Sic in codice. Hoc loco lunæ usus est Tycho ad eruendam parallaxin eius (Progymn. p. 461, hujus ed. T. II. p. 412).

² Hæc manu Tychonis conscripta non sunt.

cupis, ipfa Solis remotio a Meridiano
versus ortum compotem te reddet.

Locus ☉ ad Meridiem huius diej
potest accipi absque fenfibili omni
errore in 10 40 Ω .

DIE 26 SEPTEMBRIS A. M.

Fuit ☉ circa 90 Gr. H. 6 M. 53.

Nota. Luna hoc die non longe abe-
rat ab extrema remotione Epicyc-
lorum.

H. 8 M. 32 Decl. infer. cornu ☉ 16 7 Bor.
Alt. super. cornu 44 $\frac{1}{2}$.

Non satis exacta sed paulo minor.
H. 8 58' Decl. infer. cornu 16 4 $\frac{1}{2}$ me-
lior priori.

Alt. ☉ 18 Gr., ☉ 41 $\frac{2}{3}$.

9 0 Decl. super.

limbi ☉ 16 30 $\frac{1}{3}$

9 2 Eadem repetita 16 31 $\frac{1}{3}$ melior

9 3 Eadem 16 31 $\frac{1}{3}$ bona

9 4 Decl. infer. limbi 16 3 $\frac{1}{2}$

9 5 Eadem repetita 16 3 bona

Orient limb. Centrum ☉
☉ ad occ. orient.

| | | | |
|--------------------|---------------------|---------------------|----------------------|
| 9 6 $\frac{3}{4}$ | 38 37 $\frac{1}{2}$ | 43 25 $\frac{1}{2}$ | 82 3 |
| 9 9 | 39 13 $\frac{1}{4}$ | 42 50 $\frac{1}{2}$ | 82 3 $\frac{3}{4}$ |
| 9 10 $\frac{2}{3}$ | 39 41 $\frac{1}{6}$ | 42 20 $\frac{2}{3}$ | 82 2 |
| 9 12 $\frac{2}{3}$ | 40 5 $\frac{1}{2}$ | 41 55 $\frac{1}{6}$ | 82 0 $\frac{2}{3}$ * |
| 9 14 $\frac{1}{6}$ | 40 27 $\frac{1}{4}$ | 41 32 $\frac{1}{3}$ | 82 0 |

* Hæ tres erant bonæ quemadmo-
dum ipse obseruauit.

9 17 $\frac{1}{2}$ Decl. super. cornu 16 29

9 19 $\frac{1}{2}$ 16 29 $\frac{1}{4}$

9 20 $\frac{1}{2}$ Decl. infer. cornu 16 2

9 22 16 1 $\frac{1}{4}$

☉ Alt.

9 23 $\frac{1}{3}$ 42 40 39 15 81 55 ☉ 21 $\frac{1}{4}$

9 26 43 19 $\frac{5}{6}$ 38 34 $\frac{1}{2}$ 81 53 $\frac{1}{2}$ ☉ 39

9 36 45 50 36 3 $\frac{1}{2}$ 81 53 $\frac{1}{2}$ ☉ 37

9 38 46 17 $\frac{1}{3}$ 35 34 $\frac{2}{3}$ 81 52

9 42 47 15 $\frac{1}{2}$ 34 35 $\frac{1}{3}$ 81 50 $\frac{5}{6}$ } bonæ

9 45 $\frac{1}{3}$ 48 1 $\frac{1}{2}$ 33 47 $\frac{1}{2}$ 81 49 }

9 50 $\frac{1}{3}$ Repet. Decl.

super. cornu 16 26 $\frac{1}{2}$

Alt. ☉ 35 $\frac{2}{3}$ °.

9 52 inferioris cornu 15 59 $\frac{1}{4}$

☉ occ. ☉ orient. Dist. æquat. Alt.

10 0 51 45 $\frac{1}{4}$ 29 58 $\frac{1}{4}$ 81 43 $\frac{1}{2}$

10 5 52 50 28 51 81 41

10 7 53 17 28 22 $\frac{1}{2}$ 81 39 $\frac{1}{2}$

10 8 $\frac{2}{3}$ 53 40 27 58 81 38 } ☉ 25 $\frac{1}{2}$
☉ 32 $\frac{1}{4}$

10 15 $\frac{2}{3}$ 55 24 $\frac{1}{2}$ 26 13 81 37 $\frac{1}{2}$ non bona

10 20 $\frac{1}{2}$ 56 33 25 1 81 34 } ☉ 26

10 21 $\frac{1}{2}$ 56 48 24 45 $\frac{1}{2}$ 81 33 $\frac{1}{2}$ ☉ 31 $\frac{1}{2}$

N. B. Tempora aßignata sunt cor-
recta.

Nota etiam orientalem limbum ☉
obseruatum vbique esse a centro ☉.

H. 10 24 $\frac{1}{2}$ ' repetita Decl.

super. cornu ☉ 16 22 $\frac{1}{2}$

10 27 $\frac{5}{6}$ Decl. inferioris

cornu 15 54 $\frac{3}{4}$

10 29 Eadem repetita 15 54 $\frac{3}{4}$

Nota. In his omnibus obseruationi-
bus lunaribus habenda etiam est ra-
tio parallaxeos lunaris, eo quod luna
a 90 Gradu plurimum remouebatur
versus occasum.

DIE 10 OCTOBRIS.

H. 5 24' P. M. ☉ in 90 Gr. ab Ascen-
dente.

N. B. Obseruatio ☉ ad Vesperas facta
cum non longe abesset a maxima re-
motione per vtrumque Epicyclum,
quamvis non exquisite in 90 Gradu.

Horologium fuit in Meridie correc-
tum.

H. 6 M. 41 Decl. infer. cornu ☉ 13 29 $\frac{1}{4}$

superioris cornu 13 2 $\frac{1}{2}$

Alt. ☉ fuit Grad. 20 0

Lucida Occid. limb. Diff. asc.
Vult. occ. ☉ ad ort.

6 48 14 12 $\frac{1}{2}$ 6 45 $\frac{3}{4}$ 20 58 $\frac{1}{4}$

Alt. sup. cornu ☉ fuit interea 20° 50'.

6 51 14 52 $\frac{1}{2}$ 6 5 20 57 $\frac{1}{2}$

7 2 $\frac{1}{2}$ 17 45 $\frac{1}{2}$ 3 18 $\frac{3}{4}$ 21 4 $\frac{1}{4}$

7 7 $\frac{3}{4}$ 19 1 2 4 $\frac{3}{4}$ 21 5 $\frac{1}{4}$

7 12 Decl. super. cornu ☉ 13 2 M.
per Armillas, inferioris 13 28

7 22 Decl. super. cornu ☉ 12 57 $\frac{1}{2}$

melior & ferenior

Eodem tempore per Q. Volubilem

Alt. super. cornu ☾ 21 5
 Alt. inferioris cornu 20 38½
 Diameter ☾ 0 26⅔

Erat itaque Alt. Merid. centri ☾ 20 52,
 ergo declinatio 13 12½
 Eadem centri ☾ decl.

per Arm. 13 13

Nota. Non fuit exacte serenum, quando hæc obseruabantur in ☾, sed recurrentes subinde nubes lunam ofuscabant: neque tunc cum serenior paulo appareret, vsque adeo perspicua erat absque interuenientibus rari-
 usculis vaporibus. Erat tamen aliqua-
 tenus serenum, vt mediocriter fidere
 possis his obseruationibus, præsertim
 vbi apertissime inuicem quadrant,
 collatione temporis & obseruationis.

DIE 13 OCTOBRIS.

Ad Vesperas.

H. 6 M. 42 ☾ fuit in 90 Gradu, quo tem-
 pore non erat serenum.

Horologium ad dist. Aldeboræ a Me-
 ridie correctum est.

H. 8 30½' Decl. super. limbi ☾ 2 21 Mer.
 Per Armillas subterr.

| | Luc. Vult. ad occas. | Occid. limb. ☾ ad ort. | Dist. æquat. |
|------------------------------|-------------------------|---------------------------|-----------------|
| 8 35½ | 44 41½ | 12 4½ | 56 46 |
| 8 39 | 45 43½ | 11 2½ | 56 45⅓ |
| 8 42 | 46 15½ | 10 32½ | 56 47⅔ |
| 8 44½ | 46 46¼ | 10 0¾ | 56 47 |
| 8 47½ | 47 33½ | 9 14½ | 56 48 |
| 8 50 Decl. super. limbi ☾ | | 2 20 M. | |
| 8 51½ infer. limbi | | 2 49 | |
| per Armillas maior. subterr. | | | |
| 8 52½ Repetita infer. limbi | | 2 51 | |
| 8 53½ Eadem | | 2 51 | |

N.B. In omnibus distantijs accipie-
 batur occidentalis limbus ☾.

H. 9 26' ☾ in Meridiano habuit decli-
 nationem superioris limbi 2 11¼
 inferioris limbi 2 44
 Diameter ☾ 0 32⅔

Eodem tempore fuit Altitudo eius
 meridiana quoad superiorem limbum
 per Q. Portat. 31 54½

H. 12 M. 7½ Dist. Aldeb. a Mer. 33 40

Ergo horologium ab eo tempore
 quo cœpimus obseruare hucusque
 M. 3½ celerius iusto mouebatur.

DIE 14 OCTOBRIS.

Ad Vesperas.

H. 7 28½' Decl. super. limbi ☾ 1 15

Bor. vtroque pinnacidio.

7 30⅔ Infer. limbi ☾ 0 43½
 Diameter ☾ 0 31½

7 31 Luna fuit in 90 Gra. iuxta sup-
 putationem.

Per Armillas maiores subterr.

| | Prima alæ Pegasi or. | Occid. limb. ☾ ad or. | Dist. æquat. |
|-------|-------------------------|--------------------------|-----------------|
| 7 35⅔ | 18 43¼ | 37 57½ | 19 14½ |
| 7 37½ | 18 18 | 37 34½ | 19 16½ |
| 7 38½ | 17 53½ | 37 10½ | 19 17 |
| 7 40 | 17 31 | 36 48½ | 19 17½ |
| 7 43½ | 16 48½ | 36 6¼ | 19 17¾ |

Stella erat inter rariores nubes.

7 46⅔ Decl. super. limbi B. 1 17½

7 48¼ inf. limbi 0 46

Alt. ☾ 29° per Q. min., Diam. ☾ 31½

| | Luc. Vult. occid. | Occid. limb. ☾ orient. | Dist. æquat. |
|-------------------|----------------------|---------------------------|-----------------|
| 7 54½ | 34 24 | 33 22 | 67 46 |
| 7 58½ | 35 23 | 32 24½ | 67 47¾ |
| 8 0½ | 35 55 | 31 54 | 67 49 |
| 8 4½ Decl. super. | | | |

limbi ☾ Bor. 1 23

8 6 infer. limbi 0 50

8 7 Repetita super. 1 21

Diameter 0 31

Sed ☾ erat inter rariores nubes.

9 2⅔ distabat Aldeb.

a Merid. 79 0½

9 6½ 78 2½

| | |
|-------------|--------------|
| H. 5 16' 2" | H. 5 12' 10" |
| 14 15 8 | 14 15 8 |
| 8 59 6 | 9 2 58 |

Ergo tunc visum est horologium ius-
 to celerius promotum fuisse M. 3½ ha-
 bita ratione temporis a Meridie præ-
 terlapsi. Itaque hic error horologii ad
 emendandum tempora obseruatio-
 num ☾ adhibeatur.

DIE 16 OCTOBRIS.

H. 9½ ☾ in 90 Gradu supputabatur.

Pro correctione Horologij.

H. 8 49' 36" distabat Aldeb. a Meridiano.
79° M. 8 Horis 5 16' 32"

Transiit autem illo die Merid. 14 7 32

Prouenit itaque tempus verum 8 51 0

Ergo M. 1 Sec. 24 deficiebat Horologium, tantundem autem in continenti promotus est eius index, vt sequentia tempora obseruationum vera essent.

| | Prima alæ Pegasi occ. | Occid. limb. ☾ or. | Dist. æquat. |
|-------|--------------------------|-----------------------|-----------------|
| 9 13½ | 8 30 | 34 10 | 42 40 |
| 9 17½ | 9 27 | 33 16 | 42 43 |
| 9 19¾ | 10 1¼ | 32 42½ | 42 43¾ |

Non erat bene serenum. Nam tam Stella quam Luna raris involuebatur nubibus.

| | | | |
|-------|----------------------|----------|--------|
| 9 23½ | 10 56 | 31 50 | 42 46 |
| 9 26½ | 11 41¾ | 31 5 | 42 46¾ |
| 9 29½ | Decl. super. limbi ☾ | 8 47½ B. | |
| 9 31 | infer. limbi | 8 16½ | |
| | Diameter ☾ | 0 30½ | |

| | Marcab occid. | Occid. limb. ☾ orient. | Dist. æquat. |
|-------|------------------|---------------------------|-----------------|
| 9 33½ | 13 29 | 29 19 | 42 48 |
| 9 36½ | 14 12 | 28 39 | 42 51 |
| 9 38½ | 14 43¼ | 28 8½ | 42 51¾ |
| 9 39½ | 15 4 | 27 49¾ | 42 53¾ |
| 9 45 | 16 19 | 26 36 | 42 55* |

*Mediocriter bona.

| | | | |
|-------|----------------------|-------|--|
| 9 48¾ | Decl. super. limbi ☾ | 8 50¼ | |
| 9 50¾ | Infer. limbi ☾ | 8 18¼ | |
| | Diameter ☾ | 0 32 | |

In nulla harum obseruationum quæ hoc vespere factæ sunt, cælum erat exquisitè serenum.

DIE 18 OCTOBRIS.

H. 11 51 Luna in 90 Grad. iuxta supputationem.

11 24 Decl. super. limbi ☾ 14 47 B.

11 26 infer. limbi 14 13½

mediocris

Diameter ☾ 0 33½

| | Orient. limb. ☾ orient. | Oculus ☿ orient. | Dist. æquat. |
|----------|----------------------------|---------------------|-----------------|
| H. 11 33 | 23 11 | 36 57½ | 13 46½ |
| 11 34 | 22 28 | 36 13 | 13 45 |
| 11 41 | 21 10 | 34 54 | 13 44 |
| 11 43½ | 20 34½ | 34 17 | 13 42½ |
| 11 45 | 20 11½ | 33 53½ | 13 42 |
| 11 49 | Decl. super. limbi ☾ | 14 48½ | |
| 11 51 | infer. limbi | 14 16 | |
| | Diameter ☾ | 0 32½ | |

| | Orient. limb. ☾ ad ort. | Lucida ♀ occid. | Dist. æquat. |
|-------------------------------|----------------------------|--------------------|-----------------|
| 11 55 | 17 51 | 5 33 | 23 24 |
| 11 57½ | 17 6½ | 6 15½ | 23 22 |
| non satis certa propter nubes | | | |
| 12 0 | 16 40½ | 6 44½ | 23 25 |

DIE 22 OCTOBRIS A. M.

H. 3 32 ☾ in 90 G. ab Ascendente iuxta supputationem.

5 8 Decl. super. cornu ☾ 18 8 B.
infer. limbi ☾ 17 37

| | Oculus ☿ occid. | Orient. limb. ☾ occ. | Dist. æquat. |
|------|--------------------|-------------------------|-----------------|
| 5 20 | 55 16¾ | 27 39½ | 27 37¼ |
| 5 22 | 55 49 | 28 11½ | 27 37½ |

Erat mediocriter serenum.

5 25 56 27½ 28 48½ 27 38¾

Postea erat serenius.

| | Orient. limb. ☾ occ. | Cor ☿ orient. | Dist. æquat. |
|------|-----------------------------|------------------|-----------------|
| 5 42 | 32 46 | 22 54 | 55 40 |
| 5 46 | 33 34¼ | 22 3½ | 55 37¾ |
| 5 48 | Repetita Decl. sup. limbi ☾ | 18 11 B. | |
| | inferioris limbi | 17 38 | |

DIE 23 OCTOBRIS A. M.

H. 4 48' ☾ in 90 ab Ascendente iuxta calculum. Cum abesset ☾ a 90 Gr.

H. 1¼ ad occasum obseruari incepit vt sequitur.

H. 6 4 Decl. super. cornu ☾ 17 12¾
Bor.
infer. limbi 16 42½

| | Orient. limbus ☾ occid. | Cor ☿ orient. | Diff. Asc. |
|-----------------------|----------------------------|---------------------|---------------------|
| H. 6 15 $\frac{1}{3}$ | 26 16 $\frac{5}{8}$ | 15 41 $\frac{1}{4}$ | 41 58 $\frac{1}{2}$ |
| 6 17 $\frac{1}{3}$ | 26 45 $\frac{3}{8}$ | 15 11 | 41 56 $\frac{3}{8}$ |
| 6 19 | 27 14 $\frac{1}{8}$ | 14 41 | 41 55 $\frac{1}{8}$ |
| 6 20 $\frac{1}{2}$ | 27 35 | 14 20 | 41 55 |
| 6 25 | 28 37 $\frac{3}{8}$ | 13 14 $\frac{1}{2}$ | 41 52 $\frac{1}{8}$ |
| 6 30 $\frac{1}{2}$ | 29 58 $\frac{1}{2}$ | 11 52 $\frac{1}{4}$ | 41 50 $\frac{3}{4}$ |
| 6 34 $\frac{1}{2}$ | 30 48 | 11 0 $\frac{1}{4}$ | 41 48 $\frac{1}{4}$ |
| 6 40 | Repet. decl. sup. | | |

cor. ☾ 17 10 B.

infer. cornu 16 38

Nota. Quod ☾ hoc die non procul
abfuerit a maxima remotione vtrius-
que epicycli.

Postea de die obseruabatur Luna.

H. 9 9' Declin. super. limbi. ☾ 16 57 $\frac{1}{4}$ B.

9 10 infer. limbi 16 26 $\frac{1}{3}$

Alt. super. limbi ☾ 25 $\frac{1}{2}$

Diameter ☾ 0 30'55''

9 14 Dist. æquat. centri ☉ & orient.

limbi ☾ 111°18', Alt. ☉ 11 $\frac{1}{2}$

9 16 Eadem 111 16 $\frac{1}{2}$ 11 $\frac{3}{4}$

9 19 Eadem dist. 111 15 Alt. ☾ 24 $\frac{1}{2}$

9 21 111 13 $\frac{1}{2}$ Alt. ☉ 12

9 24 Repet. decl. sup. limbi ☾ 16 55

9 26 infer. limbi 16 25

Alt. ☾ 23

9 42 $\frac{3}{4}$ Repetita dist. æquat. centri ☉

& or. limbi ☾ I 111 3

9 45 II 111 2

Fuit tunc Alt. ☉ 14°, Alt. vero ☾ 20 $\frac{1}{2}$ °.

9 51 $\frac{1}{3}$ Repetita declin. super. limbi ☾

16 51 $\frac{3}{8}$

Alt. ☾ 19 Gr.

Per cor ☿ Horologium correctum
bene circumvoluebatur.

DIE 24 OCTOBRIS A. M.

H. 6 11' A. M. ☾ in 90 Gr. ab Ascen-
dente secundum supputationem.
Circa horam 5 Horologium veri-
ficatum est.

H. 5 20' Decl. super. cornu ☾ 15 27 $\frac{1}{2}$ B.

infer. cornu 14 55

Altit. super. cor. ☾ 49 $\frac{1}{3}$, Diam. 0 32 $\frac{1}{2}$

5 23 Alt. super. cornu ☾ in Merid.

per Quadr. 49 33

inferioris cornu 49 2 $\frac{1}{3}$

| | Cor ☿ or. | Orient. limb. ☾ occ. | Diff. Asc. R. |
|--------------------|---------------------|-------------------------|---------------------|
| 5 27 | 26 46 | 1 56 $\frac{1}{2}$ | 28 42 $\frac{1}{2}$ |
| 5 29 | 26 19 $\frac{1}{2}$ | 2 22 | 28 41 $\frac{1}{2}$ |
| 5 32 $\frac{1}{2}$ | 25 30 $\frac{1}{2}$ | 3 9 $\frac{1}{4}$ | 28 39 $\frac{3}{4}$ |
| 5 34 | 25 2 | 3 36 $\frac{1}{2}$ | 28 38 $\frac{1}{2}$ |
| 5 35 $\frac{1}{2}$ | 24 42 $\frac{1}{2}$ | 3 56 | 28 38 $\frac{1}{2}$ |
| 5 37 | 24 19 $\frac{1}{4}$ | 4 19 | 28 38 $\frac{1}{4}$ |
| 5 39 | 23 50 | 4 47 $\frac{1}{4}$ | 28 37 $\frac{1}{4}$ |
| 5 40 $\frac{3}{4}$ | 23 21 | 5 16 | 28 37 |
| 5 44 $\frac{1}{3}$ | Repet. Decl. | | |

sup. cornu ☾ 15 24 B.

5 45 $\frac{1}{2}$ inferioris cornu ☾ 14 51

Diameter 0 33

*Sequentibus obseruationibus ipse
interfui, eratque ☾ iuxta maximam
remotionem.*

H. 5 51 $\frac{1}{3}$ Distabat ☾ orient. limbus a
corde ☿ per Sext. 27 40

5 52 $\frac{3}{8}$ Eadem distantia 27 39 $\frac{1}{2}$

5 54 Eadem distantia 27 39 $\frac{1}{4}$

5 57 Distabat or. limbus ☾ per

Sext. a lucida in pedibus inferi-

oris Gemini 23 41 $\frac{1}{4}$

5 58 $\frac{5}{8}$ Eadem distantia 23 42 $\frac{1}{2}$

6 0 $\frac{1}{6}$ Eadem distantia 23 44

6 2 Ead. (sed hæc mi-

nus quadrat) 23 46

6 3 $\frac{2}{3}$ Eadem distantia 23 46 $\frac{1}{4}$

6 6 $\frac{1}{2}$ Declin. super. cornu 15 21

6 8 $\frac{1}{4}$ Declin. infer. cornu 14 49 $\frac{1}{4}$

6 7 fuit Alt. superior.

cornu ☾ 48 30 $\frac{1}{3}$

6 11 cum ☾ eſet in 90 Gradu.

| Or. limb. ☾ occident. | Cor ☿ orient. | Diff. æquat. |
|--------------------------|------------------|-----------------|
|--------------------------|------------------|-----------------|

12 37 15 44 $\frac{1}{2}$ 28 21 $\frac{1}{2}$

6 12 $\frac{1}{2}$ 12 58 15 22 $\frac{1}{4}$ 28 20 $\frac{1}{4}$

6 13 $\frac{2}{3}$ 13 14 $\frac{1}{2}$ 15 6 $\frac{1}{4}$

6 15 13 34 14 46 28 20

6 17 Decl. super. cornu 15 22

6 19 $\frac{1}{2}$ 14 56 $\frac{1}{4}$

Non satis certa

25 $\frac{3}{4}$

6 18 Distabat ☾ orientalis limbus
a corde ☿ per Sext. Trigon.

27 31

6 20 Eadem distantia 27 30

6 21 $\frac{1}{3}$ Eadem distantia 27 29 $\frac{3}{8}$

¹ Adscriptum est alia manu: »Vide locum ☾ infra ad hoc tempus computatum«.

| | | |
|--------------------|--------------------------------------|--|
| 6 23 $\frac{1}{2}$ | Repetita | 27 28 $\frac{3}{4}$ |
| 6 23 | Alt. super. cor. ☾ per Quadrantem | 47 47 $\frac{1}{2}$ |
| 6 25 | Declin. super. cornu ☾ | 15 20 |
| 6 26 $\frac{1}{2}$ | Declin. inf. | 14 48 32 |
| 6 26 | Altit. super. cornu ☾ | 47 37 |
| 6 28 | Repet. decl. sup. cor. ☾ | 15 19 $\frac{1}{4}$ |
| 6 30 | Declin. inferioris | 14 48 |
| 6 31 $\frac{1}{2}$ | Declin. superioris inferioris | 15 18 $\frac{3}{8}$ 14 47 $\frac{5}{8}$ |

Atque his omnibus præcedentibus observationibus lunæ circa 90 Gradum habitis ab H. 5 M. 51 vsque in horam 6 31 satis tuto potes fidere in restituendo motu ☾. Erat enim ☾ prope maximam remotionem vtriusque epicycli. Potes autem conferre tam distantias per Sext. quam æquatorias. Fuit bene serenum.

In fine harum observationum obseruavi ☾ orientalis limbi distantiam a Meridiano propter verificationem Horologij, quod erat correctum ad cor ☾ Hora 5 Matutina. Fuit autem ☾ orientalis limbus a Meridiano G. 21 M. 13 versus occasum, idque hora 6 M. 46. Stellas nullas tunc licuit obseruare tum propter diei auroram, tum propter interuenientes nubes, nisi quod H. 6 M. 48 fuit ☾ occid. 33 24.

| | ☾ occident. | ☾ occid. or. limbus | |
|-----------------------|---------------------|------------------------|---------------------|
| H. 6 49 $\frac{1}{2}$ | 33 42 | 21 55 $\frac{1}{2}$ | 11 46 $\frac{1}{2}$ |
| 6 50 $\frac{1}{2}$ | 33 59 $\frac{1}{2}$ | 22 16 | 11 43 $\frac{1}{2}$ |
| 6 51 $\frac{3}{4}$ | 34 19 | 22 35 | 11 44 |

Hæ observationes factæ sunt inter rariusculas nubes.

H. 6 M. 53 Declin.

| | | |
|--------------------|----------------------|---|
| | super. cornu | 15 16 $\frac{1}{2}$ |
| 6 55 | Decl. infer. cornu | 14 46 |
| | Diameter | 0 30 $\frac{1}{2}$ |
| 6 56 | Decl. super. cor. | 15 16 $\frac{1}{2}$ |
| 6 57 $\frac{1}{2}$ | Declin. inferioris | 14 46 $\frac{1}{4}$ 0 30 $\frac{3}{4}$ |
| 6 59 | Declin. super. cornu | 15 16 $\frac{1}{4}$ |
| 7 0 | | 14 45 $\frac{1}{2}$ |

| | | |
|--------------------|---|---|
| 7 0 | habuit superius cornu ☾ altitudinem per Quadr. Volub. | 45 15 $\frac{1}{2}$ |
| 7 2 | fuit Declin. ☾ | 22 36 B. |
| | Circa idem tempus fuit altitudo limbi vtriusque ☾ obseruata | |
| | Superioris | 45 3 |
| | Inferioris | 44 28 $\frac{1}{2}$ 34 $\frac{1}{2}$ |
| 7 3 $\frac{1}{2}$ | Repetita declin. ☾ | |
| | altero pinnacidio | 22 36 |
| | Deinde restituta serenitate denuo obseruabantur ☾ et ☾ | |
| 7 10 | Inter ☾ & limb. ☾ oriental. ab ipso Ioue remotissimum | 13 36 |
| 7 11 | Eadem distantia | 13 36 $\frac{1}{2}$ |
| 7 13 | Eadem distantia | 13 39 |
| 7 14 $\frac{3}{4}$ | Eadem & melior antecedente | 13 39 $\frac{1}{2}$ |
| 7 16 | Eadem repetita | 13 40 $\frac{1}{2}$ |
| | Eodem instanti fuit alt. super. cornu ☾ | 43 41 |

Nota. In his observationibus præcedentibus ☾ ad ☾ obseruabatur distantia per Sextantem in ea linea quæ ducitur a ☾ per centrum ☾ idque in puncto limbi a ☾ remotissimi.

Postea distantia æquatoriæ Iouis & ☾ sunt repetitæ in hunc modum.

| | ☾ occident. | Or. limbus ☾ occid. | Dist. vtriusque æquat. |
|--------------------|----------------------------------|---|---------------------------|
| 7 20 | 41 17 | 29 18 $\frac{1}{2}$ | 11 58 $\frac{1}{2}$ |
| 7 21 $\frac{1}{2}$ | 41 42 $\frac{1}{2}$ | 29 44 $\frac{1}{2}$ | 11 58 |
| 7 23 | 42 3 | 30 0 | 12 3 |
| | | | dubia } |
| 7 24 | 42 23 $\frac{3}{4}$ | 30 23 | dubia |
| 7 26 $\frac{3}{4}$ | 42 59 $\frac{3}{4}$ ¹ | 30 59 $\frac{1}{2}$ | 12 0 $\frac{1}{2}$ |
| | | | bona } |
| 7 31 $\frac{1}{2}$ | Alt. super. cornu | 42 22 $\frac{1}{2}$ | |
| | Alt. infer. cornu | 41 51 | |
| | Diameter | 31 $\frac{1}{2}$ | |
| 7 32 $\frac{1}{2}$ | Declin. super. cornu | 15 12 | |
| 7 33 | Declin. inferioris | 14 43 $\frac{1}{2}$ 28 $\frac{1}{2}$ | |
| 7 36 | Repet. decl. | | |
| | super. cornu | 15 12 $\frac{1}{2}$ | |
| 7 37 $\frac{1}{2}$ | limbi inferioris | 14 42 | |
| | Diameter | 30 $\frac{1}{2}$ | |

¹ Adscriptum est alia manu: »Resp. 7° 26' 40'', Horol. bene mouebatur«.

Atque hæc obseruatio fuit melior
antecedente. Fuit enim serenius.
Prouenit vtrobique declin. centri
14 57½.

7 44½ Repet. decl. sup. cor. 15 13

7 45½ inferioris cornu 14 41

Diameter 32

Prouenit declinatio

centri 14 57

7 47½ Repet. decl.

sup. cor. 15 12

7 48½ Decl. infer. cornu 14 41

Diameter 31

Prouenit declinatio centri 14 56½

DIE 25 OCTOBRIS.

H. 7 32' 11 in 90 Gradu A. M.

H. 6 M. 12 Transiit orientalis limbus

11 Merid. & habuit Alt. in superi-

ori cornu 46 42½

in inferiori limbo 46 11½

6 15 Obseruabatur decl.

super. cor. 12 36½

inferioris cornu 12 4

Declin. centri 12 20

| Cor 11 | Lunæ orient. | Dift. |
|---------|---------------|--------|
| orient. | limbus occid. | æquat. |
| 6 18½ | 13 1½ | 1 41 |
| 6 19 35 | 12 43¾ | 1 59 |
| 6 22 5 | 12 2¾ | 2 38 |

11 occid.

7 9 45 39 46 14 16 25 30

7 11 28 40 11½ 14 40½ 25 31

Fuit mediocriter serenum in his
obseruationibus, sed rariusculæ ta-
men intercedebant nubeculæ.

7 13½ Declin. super.

cornu 12 27 B.

7 15 Declin. infer. limbi 11 58

29

Declin. centri 12 12½

7 16 Declin. super. cornu 12 27

7 17 Declin. infer. cornu 11 58½

Diameter 28½

Ergo declin. centri 12 13 B.

Deinde 11 versante prope ipsum 90
Gradum obseruabatur a 11 in hunc
modum.

| 11 | 11 or. limbus | Dift. |
|-----------|---------------|--------|
| occident. | occ. | æquat. |
| 7 26 52 | 44 2 | 18 24½ |
| 7 29 | 44 34 | 18 54 |
| | | 25 37½ |
| | | 25 40 |

Potes absque omni sensibili errore
vti distantia æquatoria H. 7 M. 32,
quando 11 erat in 90 Gradu, a 11 25 39
atque hinc per verificatum locum
Iouis ex prioribus obseruationibus
locum 11 inquirere. Obseruabatur vbi-
que orientalis limbus 11.

H. 7 35 Decl. super. cornu 12 24½

7 37 inferioris cornu 11 55½

Diameter 29

Declinatio centri 12 10

7 38 Declin. super. cornu 12 24½

7 40 infer. cornu 11 55½

Bene videbatur 11 29

Pone tempore quando 11 erat in 90
Gradu idque H. 7 M. 32 distantiam
centrieius æquatoriam a 11 Gr. 25 25'
& declin. centri 11 Gr. 12 M. 11 hinc
que operare.

Deinde Lunam obseruauimus per
Quadr. Volub. in certis Azimutis &
Altitudinibus annotato exacte tem-
pore.

| Azim. or. limbi | Alt. super. |
|-----------------|-------------|
| 11 occ. | cornu |
| 7 44 43 | 31 0 |
| 7 47 48 | 32 0 |
| 7 51 10 | 33 0 |
| 7 54 29 | 34 0 |
| 7 57 46 | 35 0 |
| | 43 0 |
| | 42 46½ |
| | 42 30½ |
| | 42 15 |
| | 41 59½ |

Azimuta hæc omnia numerantur
a Meridiano versus occasum, & vbi-
que in Azimutis obseruabatur ori-
entalis limbus 11, in altitudinibus
vero superius cornu, quare pro cen-
tro 11 auferenda sunt, tam Altitudini-
bus quam Azimutis vbique 15 scrupula.

H. 10 19½ distabat 11 a meridiano 26 25,
differt Horologium Minutis 5½, con-
fer cum obseruatione fixarum.

H. 10 20 48 Eadem distantia 26 8

10 21 30 Eadem distantia 25 57

Fuit itaque tunc H. 10 M. 16 ideo-
que Horologium ibat iusto celerius

5 $\frac{1}{2}$ ' a tempore suæ rectificationis, quod erat H. 4 $\frac{1}{2}$ mane.

DIE 26 OCTOBRIS A. M.

H. 8 58' A. M. ☾ in 90 Gr. ab Ascendente iuxta supputationem.

Mane non erat serenum. Horologium ad Solem verificabatur iuxta horam 8 $\frac{1}{2}$.

H. 8 M. 29 Declin. super. cornu 8 40 B.
8 30 inferioris cornu 8 11 $\frac{1}{2}$

Fuit tunc Altit. superior. cornu 39 46
8 31 Reiterata super.

cornu 8 40
8 33 infer. 8 11 $\frac{1}{2}$
vt prius. 28 $\frac{1}{2}$

Ergo Declin. centri 8 26', Alt. 39 $\frac{1}{2}$ sup.

His obseruationibus ad ☾ habitis non est nimis scrupulose fidendum, quia non erat exacta serenitas, sed nubes rariores tam ☾ quam Solem nobis impediabant.

H. 8 M. 56 $\frac{1}{2}$ distabat ☾ orientalis limbus a Solis centro 73 43. Fuitque tunc declinatio ☉ 15 34. Fuit mediocris obseruatio, quia non erat satis serenum.

H. 9 55 $\frac{1}{2}$ ' Decl. super. cornu ☾ 8 29
9 56 inferioris cornu 7 56
Diameter 0 33

9 57' 40" Azim. Orientalis limbi ☾ a Meridie ad occasum per Q. Volub.
42 15

Alt. super. cornu ☾ 31 48 $\frac{1}{2}$

10 0 35 Azim. eiusdem limbi 43 1

Alt. super. cornu 31 32

11 30 $\frac{1}{2}$ Repetita Decl. super. cor. 8 11

11 31 $\frac{1}{4}$ infer. cornu 7 37 $\frac{1}{4}$

Alt. super. cornu 20 P., Diam. 0 33 $\frac{3}{4}$

11 34 10 Distabat ☉ a Mer. ad ort. pro Horologio 6 7

11 36 Decl. super. cornu ☾ 8 11

11 37 Decl. inferioris 7 36 $\frac{1}{4}$

Diameter 0 34 $\frac{3}{4}$

Orient. limb. ☾ occ. Centrum ☉ orient. Dist. æquat.

11 38 10 67 15 $\frac{1}{2}$ 5 9 $\frac{1}{2}$ 72 25

11 40 0 67 43 4 41 72 24

11 43 10 68 29 $\frac{1}{2}$ 3 54 72 23 $\frac{1}{2}$

Alt. super. cornu 18 $\frac{1}{3}$

11 46 Repetita decl.

super. cornu 8 7 $\frac{1}{2}$

Decl. inferioris 7 35 $\frac{1}{2}$

Diameter 0 32

☾ or. limb. ☉ Dist. æquat.

11 48 69 36 $\frac{1}{2}$ 2 44 72 20 $\frac{1}{2}$

11 49 69 53 $\frac{1}{4}$ 2 26 72 19 $\frac{1}{4}$

Alt. ☾ fuit 17 $\frac{1}{2}$

11 50 $\frac{1}{8}$ 70 10 $\frac{1}{2}$ 2 8 $\frac{1}{2}$ 72 19

Alt. sup. cor. ☾ 17 $\frac{1}{3}$

11 52 $\frac{1}{8}$ 70 40 1 39 $\frac{1}{2}$ 72 19 $\frac{1}{2}$

11 53 $\frac{2}{8}$ 70 58 $\frac{1}{2}$ 1 20 72 18 $\frac{1}{2}$

Alt. ☾ fuit 17 0

11 55 fuit superius cornu

☾ in Declinatione 8 6

Inferius 7 33 $\frac{1}{2}$

32 $\frac{1}{2}$

11 58 $\frac{1}{2}$ Repetita declin.

super. 8 6

7 33

Nota. Horologium in Meridie vno exquilitate scrupulo tardius ibat, idque numerando ab Hora 8 Minuto 36 quo tempore ad Solem verificabatur.

Provenit locus ☉ in 12 36 M¹ idque non habita ratione refractionis aut parallaxeos. Est enim locus Solis apparens, ad quem Lunam indagare per Armillas minores Zodiacales conabimur in hunc modum.

12 11 $\frac{3}{8}$ Verificatis Armillis minoribus per locum ☉ positum in 12 36 M¹ obseruabatur orientalis limbus ☾ in 27 24 ☉

12 14 Rectificatis Armillis vt prius visus est orientalis limbus ☾ in 27 25 ☉

12 16 Armillis verificatis vt prius obseruatus est orient. limbus ☾ in 27 26 ☉

12 19 Habuit superius cornu ☾ Alt. 14 per Q. minimum.

¹ Scilicet ex obseruatione Solis in meridiano

LOCA LUNÆ.

DIE 21 JANUARIJ.¹

| | |
|---|-----------|
| ☾ circa nonages. gradum H. 8 M. 58 | |
| H. 8 M. 55½ Distantia æqvatorea Centri ☾ a ♄ | |
| 29 4 aßumendo semid. ☾ 16. | |
| H. 9 M. 2½ Distantia Centri ☾ ab Aldebora 25 24½. | |
| Ascensio recta ♄ | 59 25 |
| Ascensio recta ☾ | 88 29 |
| Ascensio recta Aldebora | 63 5 |
| Ascensio recta ☾ | 88 29½ |
| H. 9 completa Ascensio recta ☾ limit. | |
| | 88 29 |
| Declinatio B. centri ☾ | 18 37 |
| Resp. Longitudo | 28 32½ II |
| Latitudo | 4 54 0 |
| | M. |

Calculus ex correctis motibus ad Zyzygias ☾^{res} juxta Copernianam Hypothesin supponit longitudinem ☾ 29° 27' 23" II, ut sit d^{ra} 54½ fere.

DIE 23 JANUARIJ H. 11 M. 54¹.

| | |
|------------------------------|----------|
| Ascensio recta ☾ | 120 4 |
| Declinatio cor. | 14 48 30 |
| Pro correctione add. | 30 |
| Resp. Declinatio vera | 14 49 0 |
| Altitudo Centri ☾ | 47 20 |
| Resp. Long. | 29 7½ 66 |
| adde pro lat. | 20 |
| Vera Longitudo in prop. orb. | 29 8 66 |
| Latitudo | 5 43½ M. |

Supputatio loci ☾ ad diem
23 Sept. A. M.¹

| | |
|---|-----------|
| H. 3 M. 10 ☾ in nonag. | |
| H. 3 M. 27 Distant. æqvāt. | |
| Centri ☾ a lucida ♀ | 40 29 0 |
| Ascensio recta luc. ♀ | 26 1 15 |
| Ergo Ascensio recta ☾ | 66 30 15 |
| Declinatio Centri ☾ | 17 2 0 B. |
| H. 3 M. 38 Distantia Centri ☾ | |
| per Sextantem vet. ab inferiori cap. II | 41 26 |

¹ E codice V.

| | |
|-----------------------------------|-----------|
| Declinatio ☾ Centri | 17 4 B. |
| Angulus differentia ascensionalis | 43 24 35 |
| Ascensio recta inf. cap. II | 109 58 45 |
| Ergo Ascen. recta ☾ | 66 34 10 |
| Ergo H. 3 M. 32 Asc. recta limit. | 66 32½ |
| Declinatio ☾ | 17 3 |
| Resp. Longitudo | 7 32½ II |
| Latitudo | 4 39½ M. |
| adde pro parallaxi | 2 0 |
| Pro arcu inclināt. adde | 7 10 |
| Vera longit. ☾ | 7 42 II |

Calculus apparentis motus ☾ ad Diem 24 Septembris ex Obser.¹

| | |
|---|--------------|
| H. 4 M. 19½ A. M. Distantia æqvatorea orient. limbi ☾ a lucida ♀ | 54 14½ |
| Semidiameter ☾ in æqvāt. | 17 subtr. |
| Dist. æqvāt. Centri | 53 57½ |
| Ascensio recta lucida ♀ | 26 1 |
| Ascensio recta Centri ☾ | 79 58½ |
| H. 4 M. 22½ Distantia Centri ☾ æqvāt. ab Aldebora | 16 54 15 |
| Ascensio recta Ald. | 63 4 15 |
| Ascensio recta ☾ | 79 58 30 |
| Ergo H. 4 M. 21 Ascensio recta ☾ limitata | 79 58 40 |
| Declinatio Centri | 17 53 B. |
| Resp. Longitudo | 20 26 II |
| Latitudo | 5 18½ M. |
| H. 9 M. 50 Distantia æqvāt. orient. limbi ☾ a Centro ☾ ^{lis} | 107 7 |
| Semidiameter add. | 17 |
| Vera dist. Centri ☾ | 107 24 |
| Ascensio recta ☾ ^{lis} | 189 44 15 |
| Ascensio recta Centri ☾ | 82 20 15 |
| Declinatio Centri ☾ | 17 50 B. |
| | cum Refract. |
| Resp. Longit. ☾ | 22 40½ II |
| N. B. ☾ erat in altit. 24° unde hic parallaxis et Refractio se mutuo elidunt. | |

Calculus pro apparente loco ☾
ad Diem 26 Septembris A. M. ex
Observationibus ejusdem Diei.¹
Hora 9 M. 6 $\frac{3}{4}$ Ascensio
recta ☾^{lis} 191 32 20
Ascensio recta centri
☾^{ex} ex Distantia æqua-
torea inter eam & ☾^{lem} 109 14
Declinatio B. Centri ☾^{ex} 16 16
Resp. Longitudo 18 32 $\frac{1}{2}$ ☾
Latitudo 6 1 $\frac{1}{2}$ M.
Longitudo ☾^{ex} ex Tab.
P. correctis motibus
Simpl. 18 42 28 ☾
Verum παραλλάξεις longitudinis ☾^{ex}
visum locum minorem justo ponunt.
Transit enim ☾ per nonages. g. H. 6
M. 53.

Exactior examinatio.

Altitudo ☾^{lis} tempore
observat. 19 $\frac{1}{8}$
Refractio ☾^{lis} 5' 0
Parallaxis 2 50
Differentia 2 10
Resp. in longitudine subtr. 1 40
Visa longitudo ☾^{lis} 12° 31 35
Resp. Ascensio recta ☾^{lis} 191 30 50^{vifa}
Distantia æquat.
Centri ☾ a ☾ 82 21 0
Ascensio recta Centri ☾^{ex} 109 9 50
Resp. visa Longitudo ☾^{ex} 18 28 $\frac{1}{2}$ ☾

DIE 24 OCTOBRIS.

H. 5 54' Dist. inter orient. limbum ☾
& cor ☾ per Sext. 27 39
Adde semidiam. ☾ 15
Distantia centri ☾ a Regulo 27 54
Declin. centri ☾ 15 6 B.

Tempus reductum ad vtramque
Ephem. 23^d 17^h 24^m.

| Ex obseruatione | Alphonf. Cyp. | Prut. Mæstlini |
|-------------------------------|-----------------------|----------------------|
| Long. ☾ 26 53 $\frac{1}{8}$ ☾ | 26 15 ☾ | 26 5 ☾ |
| Lat. ☾ 5 51 $\frac{1}{4}$ M. | 4 53 $\frac{1}{2}$ M. | 4 5 $\frac{1}{4}$ M. |

Deficit hic motus ☾ ex Ephemerid.
Cypriani in 38'.

Deficit etiam motus ex Eph. Mæstl.
in 48' ab obseruato longitudinis motu.
Fuit tunc ☾ $\frac{1}{4}$ vnus horæ a 90 Gr. ad
ortum.

Eodem die cum ☾ exacte eſſet in 90
Grad. H. 6 M. 11, Diff. Asc. R. centri ☾
a corde ☾ per Arm. 28 37
Asc. R. cordis ☾ 146 35
Asc. R. centri ☾ 117 58
Declinatio eiusdem 15 5

Tempus reductum ad Eph. 23^d 18^h
11^m P. M.

| Ex obseruatione ² | Alphonf. Cypri. | Prut. Mæstl. |
|------------------------------|-----------------------|--------------|
| Long. ☾ 27 4 $\frac{1}{8}$ ☾ | 26 24 $\frac{1}{2}$ ☾ | 26 15 ☾ |
| Lat. ☾ 5 50 $\frac{1}{2}$ M. | 4 53 $\frac{1}{4}$ M. | 4 55 M. |

DIE 24 OCTOBRIS.¹

| | | |
|-------------------------|---|---------------------|
| H. 6 M. 4 $\frac{1}{2}$ | Distantia orient. limbi ☾ ^{ex} a lucida pedum II | 23 46 $\frac{1}{4}$ |
| BA 74 53 | Semidiameter ☾ ^{ex} | 15 45 subtr. |
| CA 73 20 | Distantia Centri ☾ ^{ex} | 23 30 30 |
| BC 23 30 $\frac{1}{2}$ | Declinatio Centri ☾ ^{ex} | 15 7 B. |
| BAC 24 24 $\frac{1}{4}$ | Declinatio pedis II | 16 40 |
| | Ascensio recta pedis II | 93 25 $\frac{1}{4}$ |
| | Ascensio recta ☾ ^{ex} | 117 49 30 |
| | Resp. Longitudo | 26 56 $\frac{1}{8}$ |
| | | 27 1 $\frac{1}{2}$ |
| H. 6 M. 12 a Corde ☾ | Longit. ☾ ^{ex} | 5 20 |
| vide infra. | D ^{ra} | |

Si itaqve ad ultimum tempus quando ☾ fuit proxima 90^{mo} gradui ponatur
ejus longitudo a corde ☾ 27 1 II, insensibiliter aberretur.

¹ E codice V.

² Cf. Prog. p. 462 (Op. T. II p. 412).

DIE 25 OCTOBRIS A. M.

H. 6.22, Tempus reductum 24^d 17^h 52^m P. M.

| Ex obseruatione | Alphonf. Cypri. | Prut. Mæstl. |
|-----------------------------------|----------------------------|-----------------------|
| Long. 10 43 $\frac{1}{2}$ \odot | 9 56 $\frac{1}{2}$ \odot | 9 57 \odot |
| Lat. 5 29 $\frac{1}{2}$ M. | 4 32 M. | 4 33 $\frac{1}{2}$ M. |

Distabat tunc \odot a 90 Gr. ad ortum H. 1 $\frac{1}{2}$.

Postea \odot a 90 Gr. ad ortum distante $\frac{1}{3}$ vnus Horæ, H. 7 11 $\frac{1}{2}$, Tempus reductum 24^d 18^h 41^m P. M.

| Ex obseruatione | Alphonf. Cypri. | Prut. Mæstl. |
|----------------------------|-----------------|-----------------------------|
| Long. 11 1 \odot | 10 22 \odot | 10 24 $\frac{1}{2}$ \odot |
| Lat. 5 30 $\frac{1}{2}$ M. | 4 31 M. | 4 32 M. |

\odot apud 90 Gradum H. 7 29'.

| Ex obseruatione ¹ | Alphonf. Cypri. | Prut. Mæstl. |
|------------------------------|-----------------------------|-----------------------|
| Long. 11 10 \odot | 10 33 $\frac{1}{2}$ \odot | 10 36 \odot |
| Lat. 5 30 $\frac{1}{2}$ M. | 4 31 M. | 4 32 $\frac{1}{2}$ M. |

DIE 26 OCTOBRIS A. M.

Hora 8 56 $\frac{1}{2}$ '.

| Ex obseruatione | Alphonf. Cypri. | Prut. Mæstl. |
|---------------------------|-----------------|---------------|
| Long. 25 18 \odot | 25 10 \odot | 25 25 \odot |
| Lat. 5 1 $\frac{1}{2}$ M. | 3 51 M. | 3 51 M. |

Fuit tunc \odot apud 90 Grad.

Circa Meridiem \odot a 90 G. distante ad occasum Horis 3 fere, H. 11 M. 54.

| Ex obseruatione | Alphonf. Cypri. | Prut. Mæstl. |
|--------------------|-----------------|---------------|
| Long. 27 5 \odot | 26 53 \odot | 27 10 \odot |
| Lat. 4 59 M. | 3 44 M. | 3 45 M. |

DIE 26 OCTOBRIS MANE.²

H. 8 M. 57 \odot juxta nonages. grad.

Ascensio recta Centri \odot a \odot 73° 58'

Ascensio recta \odot lis 219 59

Ergo Ascensio recta \odot a 146 1

Declinatio \odot a 8 24 B.

Resp. Longitudo 25 26 \odot

Subtrahe pro latitud. \odot a 6

Ergo vera longitudo \odot a

respectu proprij circuli 25 20 \odot

DIE 29 OCTOBRIS A. M.

H. 5 M. 14 $\frac{1}{2}$ verificabatur Horologium ad oculum \odot quod saltem 1 $\frac{1}{2}$

Minuto tardius ibat, isque defectus erat vltra bidui quo corregebatur.

Postea obseruabatur \odot quæ erat iuxta ortum habuitque tunc magnam parallaxin.

H. 5 38' Fuit declin. super. cornu 4 14 M.

5 40 $\frac{1}{2}$ Declin. infer. cornu 4 42 $\frac{1}{2}$

Alt. superioris cornu \odot fuit circa hæc tempora 13 8 $\frac{1}{2}$, sed postea

5 42 $\frac{3}{4}$ Repetita decl. super. cornu 4 15 $\frac{1}{4}$

Habuit tunc altitudinem in inferiori limbo 13 14 $\frac{1}{4}$.

5 44 $\frac{1}{4}$ Declin. inf. cornu 4 44

Declin. super. 4 15 $\frac{1}{4}$

Diameter 28 $\frac{3}{4}$

Ergo Hora 5 M. 43 fuit

Declin. centri \odot 4 30

| Or. limb. | Cor \odot | Dist. |
|-------------|-------------|--------|
| \odot or. | etiam or. | æquat. |

5 48 $\frac{3}{4}$ 56 34 16 17 40 17

5 50 $\frac{1}{2}$ 56 14 $\frac{1}{2}$ 15 55 $\frac{1}{2}$ 40 19

Fuit Alt. infer. limbi \odot tunc 13 59 $\frac{3}{4}$

5 51 $\frac{1}{2}$ 55 53 $\frac{1}{2}$ 15 34 40 19 $\frac{1}{2}$

Fuit tunc Alt. infer. limbi \odot 14 12 $\frac{3}{4}$

5 53 $\frac{1}{2}$ 55 28 $\frac{3}{4}$ 15 7 $\frac{1}{2}$ 40 21 $\frac{1}{4}$

Fuit Alt. \odot tunc 14 $\frac{1}{2}$.

5 55 $\frac{1}{2}$ Decl. super. limbi \odot 4 17 $\frac{1}{2}$ M.

5 56 $\frac{1}{2}$ Decl. infer. limbi 4 47 $\frac{1}{2}$

Diameter 0 30

Ergo Hora 5 Minuto 56 fuit Declin. centri \odot 4 32 $\frac{1}{2}$ Aultrina.

7 17 Declin. super. cornu \odot 4 35

7 18 Declin. infer. limbi 5 5

Fuit tunc Alt. infer. limbi 22 22

| \odot or. limb. | \odot | Dist. | Alt. inf. |
|-------------------|---------|--------|---------------|
| or. | occid. | æquat. | limbi \odot |

7 19 $\frac{1}{2}$ 34 37 $\frac{3}{4}$ 46 26 81 3 $\frac{3}{4}$

7 21 $\frac{1}{2}$ 34 6 $\frac{3}{4}$ 46 57 81 3 $\frac{3}{4}$ 22 58 $\frac{1}{2}$

7 23 33 42 $\frac{1}{4}$ 47 22 81 4 $\frac{1}{4}$ 23

7 24 $\frac{1}{2}$ 33 22 $\frac{1}{2}$ 47 43 81 5 $\frac{1}{2}$

7 26 $\frac{3}{4}$ 32 53 $\frac{1}{2}$ 48 12 $\frac{3}{4}$ 81 6 $\frac{1}{4}$ 23 48 $\frac{1}{2}$

7 28 32 33 $\frac{1}{2}$ 48 33 $\frac{1}{2}$ 81 6 $\frac{3}{4}$ 24 0

7 30 $\frac{1}{2}$ Declin. super. limbi \odot 4 39

7 31 Declin. infer. limbi 5 6 $\frac{1}{2}$

Diameter 27 $\frac{1}{2}$

¹ Cf. Prog. p. 462 (Op. II pp. 412—413).

² E codice V.

| | | | | | | | | | |
|---|------------------|----------------------|------------------|----|------------------|----|------------------|------------------|----|
| 7 | 34 $\frac{3}{4}$ | 30 | 55 $\frac{1}{2}$ | 50 | 15 | 81 | 10 $\frac{1}{2}$ | 24 | 5 |
| 7 | 36 | 30 | 35 $\frac{1}{8}$ | 50 | 36 | 81 | 11 $\frac{1}{8}$ | | |
| 7 | 37 $\frac{1}{2}$ | 30 | 14 $\frac{3}{4}$ | 50 | 56 $\frac{1}{2}$ | 81 | 11 $\frac{1}{4}$ | 24 $\frac{1}{2}$ | |
| 7 | 43 | Declin. super. limbi | | | | | | 4 | 40 |
| 7 | 43 $\frac{1}{2}$ | Declin. infer. limbi | | | | | | 5 | 10 |
| | | | | | | | | 30 | |

Tunc fuit. Alt. ☉ 24 34 $\frac{1}{2}$ quo ad inferiorem limbum.

| | | | | | | | | | |
|---|------------------|-----------------------|--|--|--|--|--|---|----|
| 7 | 45 $\frac{1}{2}$ | Repetita super. limbi | | | | | | 4 | 41 |
| 7 | 46 $\frac{1}{2}$ | Repetita infer. | | | | | | 5 | 10 |
| | | Diameter | | | | | | | 29 |

Fuit tunc Alt. infer. limbi 24 45

| | | | | | | | | | |
|---|------------------|-------------------------|--|--|--|--|--|----|------------------|
| 7 | 48 $\frac{1}{4}$ | Repetita declin. super. | | | | | | 4 | 42 |
| 7 | 49 $\frac{1}{8}$ | Repetita infer. | | | | | | 5 | 11 $\frac{3}{4}$ |
| | | | | | | | | 30 | |

Alt. ☉ vt prius tunc fuit 24 55

| | | | | | | | | | |
|---|------------------|------------------------|--|--|--|--|--|---|------------------|
| 7 | 50 $\frac{3}{4}$ | Declin. infer. limbi ☉ | | | | | | 5 | 11 $\frac{1}{2}$ |
| 7 | 52 $\frac{1}{2}$ | Declin. super. limbi ☉ | | | | | | 4 | 43 |

Fuit tunc Alt. infer. limbi 25 11 $\frac{1}{2}$

| | | | | | | |
|---|------------------|----|---|-------------------------------|------------------|---------------------|
| 8 | 39 | 10 | ☉ | a Meridie ad ort. | 50 | 22 |
| 8 | 40 | 50 | | pro horologio | 49 | 56 |
| 8 | 43 $\frac{1}{8}$ | | | Declin. super. cornu ☉ | 4 | 54 $\frac{1}{4}$ M. |
| | | | | Declin. infer. limbi ☉ | 5 | 24 $\frac{1}{2}$ |
| | | | | Alt. infer. limbi per Q. min. | 27 $\frac{3}{4}$ | |

| | | | Dist. æquat. centri ☉ & or. limbi ☉ | Decl. ☉ auſt. | Alt. ☉ | Alt. inf. limbi ☉ |
|---|------------------|--|---|---------------------|--------------------|----------------------|
| 8 | 50 | 34 | 50 $\frac{1}{2}$ | 16 28 | 7 25 $\frac{1}{2}$ | 27 $\frac{5}{8}$ |
| 8 | 55 | 34 | 49 $\frac{1}{2}$ | 16 28 $\frac{1}{2}$ | 7 54 $\frac{3}{8}$ | 27 50 |
| 8 | 59 $\frac{1}{8}$ | { 34 43 $\frac{3}{4}$ incerta propter nubes. | | | | |
| | | | | 16 28 $\frac{1}{2}$ | 8 18 $\frac{1}{2}$ | 27 55 |
| 9 | 5 | Repetita decl. super. | | | | |
| | | | | | cornu ☉ | 4 57 |
| 9 | 6 $\frac{1}{2}$ | Decl. infer. limbi ☉ | | | | 5 26 |

N.B. in ſequentibus obſervationibus erat ſerenius.

| | | | | | | |
|---|------------------|----------------------|------------------|---------------------|---------------------|---------------------|
| 9 | 8 $\frac{1}{2}$ | 34 | 45 | 16 29 | 9 10 | |
| 9 | 11 | 34 | 44 $\frac{1}{2}$ | 16 29 $\frac{1}{2}$ | 9 23 | |
| 9 | 14 | 34 | 42 $\frac{1}{2}$ | 16 29 $\frac{3}{4}$ | 9 41 | 28 30 |
| 9 | 17 $\frac{1}{2}$ | 34 | 41 | 16 30 | 10 1 $\frac{1}{2}$ | 28 40 |
| 9 | 20 $\frac{5}{8}$ | 34 | 39 | 16 30 | 10 16 $\frac{3}{8}$ | 29 0 |
| 9 | 23 | Decl. super. cornu ☉ | | | | 4 59 $\frac{1}{2}$ |
| 9 | 24 $\frac{1}{2}$ | Decl. infer. cornu ☉ | | | | 5 29 $\frac{1}{2}$ |
| 9 | 44 | Decl. ☉ obſeruata | | | | 16 31 $\frac{3}{4}$ |
| | | | | | | M. |

Reſp. locus ☉ viſus 15 29 M

H. 0 32 P.M. ☉ in 90 Gr. ſecundum ſupputationem.

¹ De novo meridiano cf. ſupra p. 12.

DIE 3 NOUEMBRIS AD VESPERAS.

| Tempus H. M. S. | Alt. ſuper. cornu ☉ | Azim. occid. limbi ☉ a Mer. ad occ. | Decl. ☉ Merid. | cornu |
|--------------------|------------------------|---|---------------------|-------|
| 4 48 $\frac{1}{2}$ | 10 38 | 29 15 | 19 12 | ſup. |
| 4 51 $\frac{1}{3}$ | 10 26 | 29 55 | 19 37 | inf. |
| 4 58 | 9 59 | 30 50 | 19 13 | ſup. |
| 5 1 40 | 9 42 $\frac{1}{2}$ | 31 52 | | |
| 5 3 10 | 9 35 | 32 30 | 19 13 $\frac{1}{2}$ | ſup. |
| 5 4 50 | 9 30 | 32 47 $\frac{1}{2}$ | 19 14 | ſup. |
| 5 7 40 | 9 29 $\frac{3}{4}$ | 33 24 | 19 13 $\frac{3}{8}$ | ſup. |

In ſequentibus erat ſerenius & ſunt exactiores.

| | | | | |
|---------|-------------------|-------|---------------------|------|
| 5 15 0 | 8 46 | 35 0 | 19 12 | ſup. |
| | | | 19 38 | inf. |
| 5 21 0 | 8 20 | 36 13 | 19 11 $\frac{1}{2}$ | ſup. |
| | | | 19 38 $\frac{1}{2}$ | inf. |
| 5 24 30 | 8 2 $\frac{1}{4}$ | 37 0 | 19 10 $\frac{1}{2}$ | ſup. |
| | | | 19 37 $\frac{1}{2}$ | inf. |

5 37 50 Lucida Vulturis a meridie ad occaſum 16 39 $\frac{1}{2}$. Hinc poterit verificari Horologium ad nouum Meridianum.¹

DIE 4 NOUEMBRIS P. M.

H. 2 M. 55 ☉ circa 90 Grad.

| | | | | | |
|---|------------------|----------------------|--|--|------------------------|
| 1 | 59 $\frac{1}{2}$ | Decl. ſuper. cornu ☉ | | | 18 38 $\frac{1}{2}$ M. |
| 2 | 0 $\frac{1}{2}$ | Decl. infer. cornu ☉ | | | 19 5 |
| | | Diameter ☉ | | | 0 26 $\frac{1}{2}$ |
| | | Tunc fuit Alt. | | | |

| | | | | | |
|---|---|------------------------|--|--|------------------------|
| | | ſuper. cornu | | | 13 $\frac{1}{8}$ |
| 2 | 5 | Decl. ſup. cor. repet. | | | 18 38 $\frac{1}{2}$ M. |
| | | infer. cornu | | | 19 4 |
| | | Alt. ſuper cornu ☉ | | | 13 $\frac{1}{2}$ |

| Tempus | Dist. inter occ. limb. ☉ & centrum ☉ per Sext. | Alt. | Alt. ſuper. cornu ☉ |
|--------------------|---|-------|------------------------|
| 2 10 $\frac{2}{3}$ | 48 1 $\frac{1}{4}$ | 10 50 | 13 $\frac{5}{8}$ |
| 2 15 $\frac{2}{3}$ | 48 3 | 10 40 | 13 56 |
| 2 18 $\frac{1}{4}$ | 48 3 $\frac{1}{2}$ | 10 30 | 14 0 |
| 2 20 $\frac{3}{4}$ | 48 4 $\frac{1}{4}$ | 10 20 | 14 5 |
| 2 23 | Fuit declin. ☉ 18 14, Alt. ☉ tunc fuit 10°. | | |

| | | |
|-----------------------|--------------|------------------------|
| 2 25 Declin. super. | | |
| | cornu ☾ | 18 36 $\frac{1}{2}$ M. |
| | infer. cornu | 19 3 $\frac{1}{2}$ |
| Alt. superioris cornu | | 14 $\frac{1}{4}$ |

2 28 Repetita Declin. ☉ 18 13 $\frac{3}{4}$
Alt. ☉ 9 $\frac{5}{8}$

2 31 Repet. decl.
sup. cornu 18 36 $\frac{1}{2}$
infer. cornu 19 3 $\frac{1}{2}$
Diameter ☉ 0 27

| Tempus | Diff. occ. limbi ☉ a centro ☉ | Alt. ☉ | Alt. super. cornu ☉ |
|---------|----------------------------------|--------|------------------------|
| 2 37 20 | 48 9 $\frac{1}{2}$ | 9 0 | 14 37 |
| 2 40 35 | 48 11 | 8 45 | 14 46 |
| 2 43 0 | 48 12 $\frac{1}{8}$ | 8 30 | 14 48 |
| 2 45 35 | 48 13 $\frac{1}{4}$ | 8 15 | 14 55 |
| 2 50 0 | 48 15 $\frac{1}{4}$ | 8 0 | 15 1 |
| 2 52 45 | 48 16 $\frac{3}{4}$ | 7 45 | 15 10 |

2 55 Declin. superioris
cornu 18 36

2 56 $\frac{1}{2}$ Declin. infer. cornu 19 4
Diameter visibilis ☉ 0 28
2 57 $\frac{1}{2}$ Declin. centri ☉ vifa 18 12 $\frac{1}{2}$
Fuit tunc Alt. ☉ 7 15

Fuit tunc lunæ Alt. 15 $\frac{1}{2}$ quasi, id-
que quo ad superius cornu ☉ attinet.

| | Diff. occ. limb. ☉ a ☉ | Alt. Solis | Alt. super. cornu ☉ |
|-------------------|---------------------------|------------|------------------------|
| 3 0 $\frac{1}{2}$ | 48 20 | 7 0 | 15 13 |
| 3 2 | 48 20 $\frac{3}{4}$ | 6 50 | 15 14 |
| 3 3 $\frac{3}{4}$ | 48 22 | 6 40 | 15 18 |
| 3 5 $\frac{1}{4}$ | 48 23 | 6 30 | 15 19 |

3 7 $\frac{1}{4}$ Declin. Solis 18 12
Alt. Solis tunc fuit 6 20
3 9 $\frac{1}{2}$ Declin. super.
cornu ☉ 18 36

3 10 $\frac{1}{2}$ infer. cornu 19 3 $\frac{1}{4}$
Diameter 0 27 $\frac{1}{4}$

Altitudo super. cornu ☉ 15 20

Quapropter priores ☉ altitudines
non sunt in ipsis minutis satis ex-
actæ.

| H. M. | Diff. ☉ vt prius a ☉ | Alt. ☉ | Alt. ☉ vt prius |
|--------------------|-------------------------|--------|--------------------|
| 3 13 $\frac{1}{4}$ | 48 25 $\frac{1}{8}$ | 5 40 | 15 21 |
| 3 15 | 48 26 | 5 30 | 15 23 |
| 3 16 $\frac{1}{2}$ | 48 27 | 5 25 | 15 25 |
| 3 19 $\frac{1}{2}$ | 48 28 | 5 0 | 15 28 |

3 21 $\frac{1}{2}$ Declin. ☉ vno
pinnac. 18 10 $\frac{1}{8}$

3 22 $\frac{1}{2}$ Declin. ☉ alt. pinnac. 18 10 $\frac{1}{4}$
Alt. ☉ tunc 4 50

3 26 Declin. super.
cornu ☉ 18 35 M.

3 27 $\frac{1}{2}$ infer. cornu 19 2 $\frac{1}{2}$

3 28 5" Transiit occidentalis lim-
bus ☉ per Merid. & habuit orien-
tale cornu altitudinem 15 29 $\frac{1}{4}$
inferius cornu 15 2 $\frac{3}{4}$
Diameter 0 27

3 29 $\frac{3}{4}$ Decl. super. cornu ☉ 18 35
infer. 19 1 $\frac{1}{2}$

Diameter ☉ app. 0 26 $\frac{1}{2}$

Deinde pro horologio verificando
obseruabatur distantia ☉ a Meridi-
ano in hunc modum. Erat autem ho-
rolog. in ipso Meridie satis exacte
correctum.

| H. M. | ☉ a Meri- diano occ. | Declin. ☉ vno pinn. | Alt. ☉ |
|--------------------|-------------------------|------------------------|-----------------|
| 3 33 $\frac{1}{2}$ | 52 11 $\frac{1}{2}$ | 18 8 | 3 $\frac{3}{4}$ |
| 3 35 $\frac{1}{2}$ | 52 31 $\frac{1}{2}$ | 18 7 $\frac{3}{4}$ | 3 $\frac{1}{2}$ |
| 3 36 $\frac{3}{4}$ | 52 53 | 18 7 $\frac{3}{8}$ | 3 $\frac{1}{8}$ |
| 3 38 $\frac{1}{2}$ | 53 17 | 18 7 $\frac{1}{2}$ | 3 $\frac{1}{4}$ |

Sed hæ obseruationes in Sole non
sunt satis tutæ pro horologio ob re-
fractionem Solarem, sed consulendæ
sunt potius stellæ. Nam quod quinis
circiter scrupulis abundet a Meridie
Horologium vix habet certitudinem
aliquam.

Repetita obseruatio ☉ ad Vulturem
per Armillas maiores æquatorias
collata. Distantia æquatoria a Vul-
ture idque quoad occidentalem lim-
bum.

| H. M. | Declin. inferi- oris limbi ☉ | Diff. æquat. | Alt. inf. limbi ☉ |
|--------------------|---------------------------------|---------------------|----------------------|
| 4 59 | 18 57 $\frac{1}{4}$ | 11 1 $\frac{1}{8}$ | 16 0 |
| 5 3 $\frac{1}{4}$ | 18 58 | 10 59 $\frac{1}{2}$ | 13 0 |
| 5 7 | 18 58 $\frac{1}{2}$ | 10 58 | 12 30 |
| 5 10 $\frac{1}{2}$ | 18 59 | | 12 20 |
| 5 13 $\frac{1}{2}$ | 18 59 $\frac{1}{2}$ | 10 58 | 12 0 |

Sed nota quod refractionis ☉ in tam
declinui situ causare potuerit, quod
ipsa quasi stationaria videretur.

Postea pro tempore verificando ob-
seruabatur Vultur in distantia æqua-
toria a Meridiano per Armillas.

H. 5 M. 15 30" Vultur occ. 14 35
5 16 55 14 55
5 18 0 15 11 $\frac{1}{2}$

Ex his colligitur, posita Ascens.

Recta lucidæ Vulturis 292 41 & Ascen. Recta ☉ 229 17 ex propria restitutione vtriusque, quod horologium a Meridie hucusque citius iusto promotum fuerit M. 4½ fere. Verum animadvertendum quod horologium correctum erat ad nouam Meridiani inuentionem. Armillæ vero ad veterem monstrabant, ideoque vno Minuto exacte tardius, quare non deficiunt reuera in horologio nisi M. 3½ quibus citius ibat, atque his observationibus tam in ♀ quam ☿ ad hanc temporis correctionem bene limitatis potes satis certo fidere. Erat enim bene serenum & tranquillum.

In Meridie proxime sequenti Horologium 7 Minutis iusto velocius ab H. 5½ vespertina promotum fuisse, Solis transitus per Meridianum indicauit.

Inquisitio loci ☿ ex observatione ejus a ☉ ad diem 4 Novemb.¹

H. 2 M. 52 fuit ☿ in nonages. gradu ab Ascendente.

H. 2 M. 51½ juxta correctionem Horologij satis scrupulosum

| | | |
|--------|----------------|----------|
| vifa { | Ascensio recta | 229 28 0 |
| | Declinatio M. | 18 13 M. |

Æqvatio temp. 23' sub. unde vifa & æqvalis

Ascensio recta ☉^{lis} ponatur 229 27 20²

Distantia Centri ☉^{lis} & occid. limb. ☿ 48 16½

Semidiameter ☿ ex obser. prop. 14½

Distantia Centri ☿ a Centro ☉^{lis} 48 31 0

Declinatio vifa ☿ Merid. 18 50

Angulus differentiae Ascensionalis 51 21 4
229 27 20

Ascensio recta ☿ 280 48 24

Resp. Longitudo 10 15½ 7

Latitudo 4 19½ B.

Arcus inclinationis add. 1½

Vera longitudo respectu proprii circuli ☿ 10 16 25 7

DIE 5 NOUEMBRIS.

Obseruabatur ☿ paulo ultra 90 Gradum.

H. 4 M. 44½ Declin. super.

cornu ☿ 16 48½ M.

4 45 Declin. infer. cornu 17 18½

Diameter ☿ 30

| Azim. occid. | | Alt. | | Alt. | |
|--------------|---------|--------------|-------|------------|--|
| limbi | | super. cornu | | inferioris | |
| 4 48 | 0 7 0 | 17 2½ | 16 34 | | |
| 4 52 | 7 8 0 | 16 59 | 16 30 | | |
| 5 0 | 25 10 0 | 16 49½ | 16 19 | | |

Pro examinatione temporis mox obseruabatur Vultur vt sequitur.

H. 5 1' 32" Distabat Vultur a Meridiano versus occasum 13 15 iuxta correctionem Meridiani emendatam.

| Vulturis | | Alt. | | Dist. | |
|---------------------------------|---------|----------|------|--------|--|
| Azim. occid. | | vulturis | | æquat. | |
| 5 10 | 8 20 0 | 40 29 | bona | 15 21 | |
| verificato Merid. per Armillas. | | | | | |
| 5 13 | 33 21 0 | 40 18 | | 16 13 | |
| 5 16 | 20 22 0 | 40 11½ | | 16 55 | |

N.B. Tempora aBignata sunt verificata. Hinc verificetur horol. ad observationes lunares exactius limitandas, erant etiam Azimuta & distantiae æquatoriae correctæ.

Nota. ☿ obseruabatur hoc vespere inter rariusculas nubes. Azimuta erant emendata.

DIE 6 NOUEMBRIS P. M.

H. 3 27' P. M. ☿ in 90 Gradu iuxta supputationem.

Circa horam tertiam Horologium correctum est ad Solem, quod a Meridie M. 4½ velocius promouebatur.

H. 3 3' 30" Declin. super.

cor. ☿ 14 29 M.

3 4 15 Declin. infer. cornu 14 57

Diameter ☿ 28

¹ E codice V.

² In margine: »Pro refractione ☉^{lis} 8½ absque parall. in alt. 6°. Resp. add. ascen. rect. 3' 20"«.

| Tempus | Alt. super. cornu ☾ | Azim. occid. limbi ☾ a Mer. ad ort. |
|---------|------------------------|---|
| 3 12 2 | 15 44 | 28 0 |
| 3 16 11 | 15 58½ | 27 0 |
| 3 20 42 | 16 20½ | 26 0 |
| 3 25 5 | 16 31 | 25 0 |
| 3 29 20 | 16 55¾ | 24 0 |

Obſeruabatur ſuperius cornu ☾ in altitudine & occidentalis limbus ☾ in Azimutis.

H. 3 22'45" Inter ☉ & ☾ diſtantia æquatoria obſeruabatur per Armillas ſubterr. 76 22½

Fuit autem tunc declinatio ☉ viſa 18 38½

Nota. Vbiq̃ue accipitur occ. limbus ☾ & centrum ☉. In Altitudine vero ☾ ſuperius cornu, vt dixi.

| | Declin. ☉ | Diſt. æquat. ☉ & ☾ |
|---------|-----------|--------------------|
| 3 27 40 | 18 38 | 76 23 |
| 3 29¾ | 18 37½ | 76 24½ |
| 3 31¾ | 18 37 | 76 24¾ |
| 3 34¾ | 18 36½ | 76 25½ |

Alt. ☉ 3 Grad.

| H. M. S. | Alt. ☾ | Azim. or. |
|----------|--------|-----------|
| 3 33 25 | 17 2½ | 23 0 |
| 3 37 44 | 17 14½ | 22 0 |
| 3 41 45 | 17 22½ | 21 0 |
| 3 45 55 | 17 40 | 20 0 |

3 39½ Declin. ſuper.

| | | |
|-------|------------------------|--------|
| | cornu ☾ | 14 29½ |
| 3 41 | Infer. cornu ☾ | 14 56 |
| | Diameter obſeruatus | 0 26½ |
| 3 43 | Declin. ſuper. cornu | 14 28½ |
| 3 44 | Declin. infer. cornu | 14 55½ |
| 3 46¾ | Repet. decl. ſup. cor. | 14 28½ |
| 3 48 | Inferioris declinatio | 14 55 |

Nota. His obſervationibus Lunari-
bus poteſtis ſatis tuto te fundare. Erat
bene ſerenum & ☾ erat iuxta 90 Gr.
nec longe a maxima remotione Epi-
cyclorum. Azimuta ſunt bona & Al-
titudines bonæ, ſed limitentur tem-
pora vt ſequitur.

H. 5 M. 7 Cum ☾ eſſet in Meridiano
Alt. inferioris limbi 19 17½
ſuperioris 19 49½
Diameter viſibilis ☾ 32½

5 9½ Declin.

| | | |
|-------|--------------------|-------|
| | ſuper. cornu ☾ | 14 16 |
| 5 10¾ | infer. cornu | 14 45 |
| | Diameter viſibilis | 0 29 |

Deinde pro tempore verificando
Vulturis a Meridiano diſtantiam ob-
ſeruauimus in hunc modum: Nume-
ratio autem eſt a vero Meridiano cor-
recto.

| | | |
|----------|----------|--------|
| 5H12M45" | | 18G15M |
| 5 14 5 | Vultur | 18 37 |
| 5 15 21 | occiden- | 18 59 |
| 5 16 25 | tal | 19 14½ |
| 5 17 55 | | 19 37 |
| 5 19 8 | | 19 55 |
| 5 20 1 | | 20 10 |

Atque hinc ſatis tuto poteſtis corrigi
tempus præcedentium obſervatio-
num, erat autem Horologium in Me-
ridie exacte correctum ad Nouam
Meridiani emendationem & Vulturis
diſtantiæ Meridianæ etiam Nouam
emendationem Meridiani reſpiciunt,
tum etiam Azimuta, quæ in ☾ & ♀
ſunt prius obſeruata. Quare poteſtis
ſatis tuto his te fundare tam in ☾ quam
♀ modo tempus hac ratione recte
emendetur & reſractionis ♀ habeatur
ratio, parallaxeosque Lunarſis,
quando fuit extra 90 Gr.

Luna inſuper in diſtantia æqua-
toria a Vulture obſeruabatur in hunc
modum, idque quoad occidentalem
limbum.

| | Declin. ſuper. cornu ☾ | Decl. infer. limbi | Diſt. æquat. a Vulture |
|-----------|---------------------------|-----------------------|---------------------------|
| 5H 30M40" | 14 11 | | 16 14¾ |
| 5 34 10 | | 14 44 | 16 15 |
| 5 38 25 | | 14 43¾ | 16 16½ |
| 5 41 45 | | 14 43½ | 16 18 |

Fuit circa hæc tempora obſervati-
onum Alt. lunæ idque quo ad inferi-
orem limbum 18¾

Deinde repetebatur diſtantia æqua-
toria Vulturis a Meridiano pro exac-
tiori & repetita horologiꝝ examinati-
one, idque in hunc modum.

H. 5 M. 47 58" Vultur occi- 27 26½
5 49 20 dentalis 27 50
5 50 17½ 28 3

Hinc denuo poterit exacte verificari Horologij indicatio, estque satis bene observatum & a vero Meridiano correctoque accepta distantia, vt in omnibus antecedentibus quoad ☾ & ♀ exactior ratio inquiri possit.

DIE 7 NOUEMBRIS P. M.

H. 3 M. 45 ☾ in 90 Gr. iuxta calculum.
H. 3½ Horologium ex Solis distantia a Meridiano verificatum est, quod a Meridie 2½ Minutis tardius ibat.
H. 3 M. 21½ Decl. super.

cornu ☾ 11 25½ B.
Decl. infer. cornu 11 53½
Diameter 0 28

| | Declin. ☉ | Dift. æquat. centri ☉ & occ. limb. ☾ | Alt. ☉ |
|-------|-----------|--------------------------------------|--------|
| 3 28 | 18 52½ | 87 54½ | 3½ |
| 3 30 | 18 52 | 87 54½ | |
| 3 31½ | 18 51¾ | 87 55½ | |

Hæc quo ad Solem & ☾ observantur, ea ratione tamen, vt habeatur ratio exquisita emendationis temporis & refractionis Solaris.

| | Alt. super. limbi ☾ | Azim. occid. limbi |
|----------|---------------------|--------------------|
| 3H33M50" | 16 49 | 35 0 |
| 3 38 7 | 17 10½ | 34 0 |
| 3 42 10 | 17 29½ | 33 0 |
| 3 46 15 | 17 43½ | 32 0 |
| 3 50 23 | 18 7 | 31 0 |
| 3 58 25 | 18 43½ | 29 0 |
| 4 2 29 | 18 59½ | 28 0 |
| 4 6 25 | 19 17½ | 27 0 |

Azimuta sunt vera iuxta nouum Meridianum.

H. 3 M. 45 Declin. ☾ in
super. cornu 11 24 Mer.
Declin. infer. limbi 11 51
Diameter apparens 0 27
4 9½ Decl. super. cornu ☾
repet. 11 19½ M.
Infer. cornu ☾ 11 49

Inter ♀ & ☾ limb. Alt. ♀ per
occ. per Sext. Quad. minim.

| | | |
|----------|--------|------|
| 4H18'55" | 40 55 | 7½ |
| 4 22 20 | 40 56½ | 6½ |
| 4 27 0 | 40 58 | 6½ |
| 4 28 25 | 40 59 | 6½ |
| 4 30 15 | 40 59½ | 6 25 |
| 4 32 0 | 41 0 | 6½ |

Alt. ♀ Declin. ☾ M. Dist. æquat. ☾
& occid. limbi ☾

| | | | |
|---------|------|--------|--------|
| 4 36 40 | 6 17 | 25 39½ | 40 46½ |
| 4 38 40 | 6 9 | 25 39½ | 40 46½ |
| 4 42 30 | 6 0 | 25 38½ | 40 47½ |
| 4 44 55 | 5 50 | 25 38 | 40 47½ |
| 4 47 30 | 5 40 | 25 37½ | 40 48½ |

Decl. infer. limbi ☾ M. Dist. æquat. occid. limbi ☾ a luc. Vulturis

| | | |
|---------|--------|--------|
| 4 52 25 | 11 44½ | 28 31½ |
| 4 54 40 | 11 44 | 28 32½ |
| 4 56 37 | 11 44 | 28 33 |
| 4 58 5 | 11 43 | 28 34½ |

N. B. In distantijs æquatorijs hodie non addebantur 15 illa Minuta vbi-que, quibus Æquator non respondet vero Meridiano, quare pro emendatione Horologij hoc erit cauendum.

DIE 10 NOUEMBRIS P. M.

H. 5 23' P. M. ☾ in 90 Gr. supputabatur.¹

4 26 13" Distabat ♀
a Merid. ad occ. 18 41
4 27 48 ♀ occ. 19 15
Fuit tunc decl. ♀ 25 24 M.
4 28 47 ♀ occ. 19 32
4 30 35 19 58

Hinc potest verificari Horologium.

4 34 Declin. super.

cornu ☾ 0 18½
inferioris 0 51 M.

4 38½ Declin. ♀ 25 25½

Dift. æquat. inter ♀ & occid. limbum ☾ 71 52½

Alt. ♀ 6½ per ☉. minimum.

4 41 Declin. ♀ 25 22½, Alt. ♀ 6 20

Dift. æquat. vt prius 71 53

4 44½ Decl. ♀ 25 22½ Alt. 6½

Dift. æquat. 71 54

¹ Adscriptum est in codice V: » ☾ reuera in 90 Gr. H. 5 M. 16«.

Verificentur tempora & stellarum capiantur exacte differentiae. Hinc poterit verificari locus ♀ a luna & viceversa, ea tamen ratione, vt vtriusque harum loca e fixis corrigantur, idque ex sequentibus obseruationibus.

| | Lucida Vulturis occ. | Occ. limbus (or. | Dift. æquat. |
|-------------------------------|----------------------|-------------------|--------------|
| 5 ^H 3 ^M | 19 56½ | 43 25½ | 63 22½ |
| 5 5 | 20 28 | 42 57½ | 63 25½ |
| 5 6 | 20 41½ | 42 42½ | 63 24 |
| 5 7½ | 21 2½ | 42 20½ | 63 23 |

Circa hæc tempora fuit Altitudo superioris cornu (24 Graduum & Alt. Vulturis 39 Grad.

Postea obseruabatur (appropinquans 90 Gradui vt sequitur.

H. 5 M. 15½ Declin. super. cornu (0 13½ M.

5 16½ Decl. infer. limbi (0 43½

Alt. (tunc fuit quasi 25 grad.

| | Vultur occid. | Occid. limbus (or. | Dift. æquat. |
|-------|---------------|---------------------|--------------|
| 5 18½ | 23 50½ | 39 38½ | 63 28½ |
| 5 19½ | 24 8½ | 39 21½ | 63 29½ |
| 5 21½ | 24 34½ | 38 54½ | 63 29½ |
| 5 22 | 24 49 | 38 40½ | 63 29½ |
| 5 23½ | 25 8 | 38 21 | 63 29 |

Limitandæ itaque sunt hæc distantie æquatoriae vt exacte respondere possint iuxta (in 90 Gr. positum.

H. 5 M. 38 Declin. super. cornu (Austr. 0 10½

5 40 Declin. infer. cornu (0 38½

Die 10 Novemb. H. 5 M. 16 90°.¹

H. 5 M. 24 Different. Ascens.

| | |
|--------------------------|---------|
| ([∞] a Vulture | 63 44 |
| Ascensio recta Vult. | 292 38 |
| Ergo Ascensio recta (| 356 22 |
| Declinatio (| 0 27 M. |
| Resp. Longitudo | 26 29½) |
| pro latitudine | 4½ |
| Ergo vera longitudo | 26 24½ |

¹ E codice V.

DIE 11 NOUEMBRIS P. M.

H. 6 M. 17 (in 90 Gr. ab Ascendente iuxta supputationem.

4 40½ Declin. super. cornu (3 25½ B. infer. cornu 2 54

Diameter appar. 0 31½

Alt. super cornu (18½

4 46 Declin. ♀ 25 16½

Dift. æquat. ab occid. limbo (81 49½

Alt. ♀ 6 36, Alt. (19½

Postea verificabatur Horologium ad lucidam V propter sequentes lunares obseruationes & inuentum est quod hora 5 45½ in horologio iuxta distantiam æquatoriam lucidæ V a Meridiano debuerit tempus esse 5^H 46^m, quod saltem dimidio scrupulo differt a vero, ideoquo non rectificabatur aliter horologium.

Sequuntur obseruationes Lunæ ipsa ad 90 Gradum applicante.

| | Decl. super. cornu | Decl. infer. cornu | Diameter apparens |
|-------|--------------------|--------------------|-------------------|
| 5 55½ | 3 38 B. | 3 4 | 34' |
| 5 59 | 3 38½ | 3 5 | 33½ |
| 6 2 | 3 38½ | 3 6 | 32½ |

Hinc ponatur centri (iuxta horam sextam a Meridie Declinatio 3 22 & insensibiliter aberrabis.

Postea obseruabantur æquatoriae distantie (vt sequitur.

| | Occ. limbus (or. | Vulturis lucida occ. | Dift. æquat. | Alt. sup. cornu |
|-------|-------------------|----------------------|--------------|-----------------|
| 6 6 | 39 23 | 35 34½ | 74 57½ | |
| | | | dub. | |
| 6 8½ | 38 49 | 36 7 | 74 56 | 29 ^G |
| | | | melior | |
| 6 10½ | 38 16½ | 36 39½ | 74 56 | 29½ |
| 6 13½ | 37 30 | 37 28 | 74 58 | 29½ |
| 6 15½ | 37 7½ | 37 53 | 75 0½ | 29½ |

Postea obseruabatur (a Lucida V vt sequitur.

| Luc. V or. | Occ. lim- bus (or. | Dist. æquat. | Alt. (|
|--------------------|------------------------|---------------------|--------------------------------------|
| 6 18 $\frac{5}{8}$ | 54 32 $\frac{1}{2}$ | 36 20 | 18 12 $\frac{1}{2}$ 30 |
| 6 20 $\frac{1}{8}$ | 54 9 $\frac{1}{2}$ | 35 57 $\frac{1}{4}$ | 18 12 $\frac{1}{4}$ 30 $\frac{1}{4}$ |
| 6 21 $\frac{1}{2}$ | 53 47 $\frac{3}{4}$ | 35 36 $\frac{1}{4}$ | 18 11 $\frac{1}{2}$ |
| <i>incerta</i> | | | |
| 6 23 $\frac{1}{8}$ | 53 23 $\frac{3}{4}$ | 35 10 $\frac{3}{4}$ | 18 13 30 $\frac{1}{2}$ |
| 6 25 | 52 59 $\frac{1}{2}$ | 34 47 $\frac{1}{4}$ | 18 12 $\frac{1}{4}$ 30 $\frac{3}{8}$ |
| 6 26 $\frac{2}{8}$ | 52 33 | 34 23 $\frac{1}{2}$ | 18 9 $\frac{1}{2}$ 30 $\frac{5}{8}$ |
| 6 29 | 51 58 $\frac{1}{2}$ | 33 48 | 18 10 $\frac{1}{2}$ 31 |

*Altitudines Lunares in superiori
cornu vbique sumptæ.*

| | | | |
|---|------------------------|---------------------|-----------------------|
| 6 31 $\frac{1}{8}$ | 51 20 | 33 12 | 18 8 31 $\frac{1}{8}$ |
| <i>bona</i> | | | |
| 6 32 $\frac{5}{8}$ | 50 56 $\frac{1}{2}$ | 32 48 $\frac{1}{2}$ | 18 8 31 $\frac{1}{2}$ |
| <i>Hæc limitentur & hinc inquiratur</i> | | | |
| (Afc. R. | | | |
| 6 35 | Declin. super. cornu (| 3 41 $\frac{3}{4}$ | |
| | Declin. infer. cornu (| 3 13 $\frac{1}{2}$ | |
| 6 39 | Declin. super. limbi | 3 45 | |
| <i>melior priore</i> | | | |
| 6 40 | Declin. inferioris | 3 14 $\frac{1}{2}$ | |
| | Diameter (| 0 30 $\frac{1}{2}$ | |
| 6 41 $\frac{1}{8}$ | Declin. super. cornu | 3 45 | |
| 6 42 $\frac{1}{2}$ | Declin. infer. cornu | 3 14 $\frac{1}{2}$ | |
| | | 0 30 $\frac{1}{2}$ | |

*Nota. His obleruationibus (potes
te latis tuto fundare, erat enim bene
serenum & latis tranquillum & (*
iuxta 90 Gradum, sed oportet vice-
versa limitare vt inuicem sibi re-
spondeant.

| | | |
|---|--------------------------|-----------------------|
| 6 45 $\frac{1}{2}$ | Repet. decl. super. cor. | 3 45 $\frac{1}{2}$ B. |
| 6 46 $\frac{1}{8}$ | Decl. infer. limbi | 3 14 |
| 6 52 31" | Dist. luc. Vulturis | |
| | a Mer. occ. | 47 22 |
| 6 53 22 | Vultur occ. | 47 35 |
| per Armillas æquat. Hinc potest Ho- rologium verificari. | | |

DIE 12 NOUEMBRIS.

H. 7 18' P.M. (in 90 Gr. ab Afcendente.
6 50' 55" Distabat h a Mer. 44 0
6 55 2 ad ortum 42 57
Hinc verificetur Horologium.

| Azim. occid. limbi (a Mer. ad or. | Alt. super. limbi (|
|---------------------------------------|------------------------|
| 6 59 55 | 44 0 33 51 |
| 7 3 34 | 43 0 34 13 |

| | | |
|---------|-------------------------|---------------------|
| 7 7 26 | 42 0 | 34 34 $\frac{3}{4}$ |
| 7 11 4 | 41 0 | 34 53 $\frac{1}{2}$ |
| 7 14 56 | 40 0 | 35 15 $\frac{3}{4}$ |
| 7 19 10 | 38 43 | 35 36 $\frac{1}{2}$ |
| 7 10 | Declin. super. limbi (| 7 27 B. |
| | Declin. infer. limbi | 6 58 |
| 7 22 | Repet. decl. sup. limbi | 7 28 |
| | Declin. infer. limbi | 6 58 $\frac{1}{2}$ |
| | Diameter (| 29 $\frac{1}{2}$ |

| Tempus | Azim. occid. limbi (ad ort. | Alt. super. limbi (|
|------------------------------------|---------------------------------|------------------------|
| 7 ^H 26 ^M 44" | 36 50 | 36 15 $\frac{3}{4}$ |
| 7 29 45 | 36 0 | 36 31 $\frac{1}{2}$ |
| 7 33 20 | 35 0 | 36 48 $\frac{1}{2}$ |
| 7 37 7 | 34 0 | 37 4 $\frac{1}{2}$ |
| 7 40 32 | 33 0 | 37 22 |
| 7 43 | Decl. super. limbi | 7 30 B. |
| 7 44 | infer. limbi | 7 0 $\frac{1}{2}$ |
| | Diameter apparens | 0 29 $\frac{1}{4}$ |
| 7 46 25 | Lucida Vult. occ. | 62 41 $\frac{1}{2}$ |

Hinc rursus temporis examen in-
stituatur, licet inter nubes obserua-
batur, tamen mediocriter bona fuit.

DIE 13 NOUEMBRIS.

H. 8 M. 26 P.M. (in 90 G.

Circa horam 7 $\frac{5}{8}$ horologij errorem
insensibilem deprehendimus per luci-
dam Vulturis.

| | | |
|-----------------------------|----------------------|------------------------|
| 5 57 $\frac{1}{2}$ | Decl. super. limbi (| 10 53 $\frac{1}{2}$ B. |
| | infer. limbi | 10 19 |
| | Diameter | 34 $\frac{1}{2}$ |
| 8 1 $\frac{2}{8}$ | Repet. decl. | |
| | super. cornu | 10 52 $\frac{1}{2}$ |
| | infer. limbi | 10 20 |
| | Diameter | 0 32 $\frac{1}{2}$ |
| Fuit tunc Alt. super. limbi | | |
| | | 38 $\frac{1}{8}$ |

| Lucida Vulturis occ. | Occid. (| Dist. æquat. |
|---|---------------------|---|
| 8 ^H 6 ^M 54 ^S | 67 55 | 31 0 98 55 |
| 8 8 48 | 68 24 | 30 29 98 53 |
| 8 11 0 | 68 57 | 29 59 $\frac{3}{4}$ 98 56 $\frac{3}{4}$ |
| 8 12 35 | 69 22 | 29 37 $\frac{1}{2}$ 98 59 $\frac{1}{2}$ |
| 8 14 0 | 69 41 $\frac{1}{2}$ | 29 18 98 59 $\frac{1}{2}$ |

Fuit circa hanc postremam obser-
uationem Alt. lucidæ Vulturis 17 $\frac{2}{8}$.

| Oculus ♀ or. | | | | | | | |
|--------------|----|----|--------------------------|------------------|----|------------------|----------------------------------|
| 8 | 20 | 40 | 59 | 1 $\frac{3}{4}$ | 27 | 35 | 31 26 $\frac{3}{4}$ |
| 8 | 22 | 25 | 58 | 34 | 27 | 9 | 31 25 |
| 8 | 23 | 41 | 58 | 15 | 26 | 52 $\frac{1}{2}$ | 31 22 $\frac{1}{2}$ |
| 8 | 25 | 0 | 57 | 55 $\frac{1}{2}$ | 26 | 34 $\frac{1}{2}$ | 31 21 |
| 8 | 26 | 18 | 57 | 36 | 26 | 15 | 31 21 |
| 8 | 33 | 12 | 55 | 51 $\frac{1}{2}$ | 24 | 30 | 31 21 $\frac{1}{2}$ |
| 8 | 34 | 47 | 55 | 27 | 24 | 5 $\frac{3}{4}$ | 31 21 $\frac{1}{4}$ |
| 8 | 36 | 20 | 55 | 4 $\frac{1}{2}$ | 23 | 44 $\frac{1}{2}$ | 31 20 |
| 8 | 37 | 27 | 54 | 45 $\frac{1}{8}$ | 23 | 25 $\frac{3}{4}$ | 31 19 $\frac{1}{2}$ |
| 8 | 38 | 55 | 54 | 23 $\frac{1}{8}$ | 23 | 4 | 31 19 $\frac{1}{8}$ |
| 8 | 29 | 50 | Decl. super. | | | | |
| | | | | | | | cornu B. 10 56 $\frac{1}{4}$ |
| | | | | | | | Infer. cornu Bor. 10 25 |
| | | | | | | | Diameter ☾ 0 31 $\frac{1}{4}$ |
| 8 | 41 | 10 | Decl. super. cornu 10 58 | | | | |
| | | | | | | | Infer. cornu 10 26 $\frac{1}{2}$ |
| | | | | | | | Diameter ☾ 0 31 $\frac{1}{2}$ |

Horologium in Meridie proxime sequenti 4 Minutis iusto tardius mouebatur, ab hora 5 vespertina quando corrigebatur ad stellas.

DIE 16 NOUEMBRIS.

H. 12 2' P. M. ☾ in 90 Gr. prout supputabatur.

| | | | | | |
|---|----|----|-------------------|----|----|
| 7 | 23 | 55 | Lucida Vult. occ. | 63 | 13 |
| 7 | 25 | 5 | | 63 | 32 |

Ex hac distantia Vulturis a Meridiano Horologium ad horam 7 $\frac{1}{2}$ est verificatum, quod M. 11 $\frac{1}{4}$ scrupulis primis iusto tardius circumvoluebatur; ante biduum non fuit exacte correctum.

| | | | | | |
|----|-----|----------------------|----|----|----|
| 11 | 30 | Decl. super. limbi ☾ | 17 | 46 | B. |
| 11 | 30½ | infer. limbi | 17 | 13 | |
| | | Diameter | 0 | 33 | |

| Lucida Seq. limbus Diff. | | | | | |
|--------------------------|---------------------|---------------------------|----|------------------|--|
| ☿ occ. | ☾ or. | aequat. | | | |
| 11 38 50 | 31 15 $\frac{3}{4}$ | 13 58 $\frac{1}{2}$ | 45 | 14 $\frac{1}{4}$ | |
| 11 40 30 | 31 40 $\frac{2}{5}$ | 13 34 | 45 | 14 $\frac{2}{5}$ | |
| 11 42 10 | 32 5 $\frac{3}{4}$ | 13 10 | 45 | 15 $\frac{3}{4}$ | |
| 11 44 0 | 32 35 $\frac{1}{4}$ | 12 43 | 45 | 18 $\frac{1}{4}$ | |
| dubia | | | | | |
| 11 45 20 | 32 56 | 12 21 $\frac{3}{4}$ | 45 | 17 $\frac{3}{4}$ | |
| 11 47 35 | 33 31 $\frac{3}{4}$ | 11 48 $\frac{1}{6}$ | 45 | 19 $\frac{5}{6}$ | |
| 11 49 0 | 33 52 $\frac{1}{2}$ | 11 26 $\frac{2}{3}$ | 45 | 19 $\frac{1}{6}$ | |
| 11 53 0 | 34 53 | 10 30 | 45 | 23 | |
| 11 54 40 | 35 18 | 10 5 $\frac{1}{2}$ | 45 | 23 $\frac{1}{2}$ | |
| 11 59 | 5 | Decl. super. cor. ☾ 17 49 | | | |

| | | |
|--------------|---|-------|
| Infer. limbi | | 17 14 |
| Diameter | | 0 35 |
| 12 1 15 | Transiit oculus ☿ per Meridianum habuitque Alt. 49 42 $\frac{1}{2}$ | |

| | | | Lucida Υ occ. | Seq. limbus ((or. | Diff. æquat. |
|----|----|----|--------------------------------------|-----------------------|---------------------|
| 12 | 5 | 48 | 38 10 | 7 16 | 45 26 |
| 12 | 7 | 0 | 38 30 $\frac{1}{2}$ | 6 58 | 45 28 $\frac{1}{2}$ |
| 12 | 8 | 10 | 38 47 $\frac{3}{4}$ | 6 42 | 45 29 $\frac{3}{4}$ |
| 12 | 9 | 30 | 39 9 $\frac{1}{2}$ | 6 20 $\frac{1}{3}$ | 45 29 $\frac{5}{6}$ |
| 12 | 11 | 35 | Decl. sup. cornu 17 49 $\frac{1}{2}$ | | |
| | | | Infer. cornu 17 15 | | |
| | | | Diameter ((0 34 $\frac{1}{2}$ | | |

| Infer caput Seq. limbus Diff. | | | | | |
|-------------------------------|---------------------|--------------------|----|------------------|--|
| ☿ or. | ☾ or. | aequat. | | | |
| 12 16 25 | 42 59 | 4 39 $\frac{1}{4}$ | 38 | 19 $\frac{3}{4}$ | |
| 12 18 0 | 42 34 $\frac{3}{4}$ | 4 16 | 38 | 18 $\frac{3}{4}$ | |
| 12 19 0 | 42 20 $\frac{1}{2}$ | 4 0 $\frac{1}{2}$ | 38 | 20 | |

DIE 18 NOUEMBRIS A. M.

H. 1 M. 15 A. M. ☾ in 90 G. ab Ascendente iuxta supputationem.

| | | |
|----------------------------|-----------------|-----------|
| 12 33' 40" | Orient. limb. ☾ | or. 12 15 |
| 12 35 9 | Idem limb. or. | 11 53½ |
| 12 35 49 | Seq. limb. or. | 11 44 |
| pro horologio verificando. | | |

| Azim. orient. | | Alt. super. | | Decl. super. | |
|---------------|------------------------|---------------------|---------------------|--------------|--|
| Tempus | limbi ☾ a Mer. ad ort. | limbi ☾ | limbi B. | | |
| 12 42 15 | 15 0 | 51 38 | | | |
| 12 46 13 | 13 30 | 51 49 | 18 17 $\frac{2}{3}$ | | |
| 12 48 56 | 12 30 | 51 54 $\frac{3}{4}$ | 18 17 $\frac{1}{2}$ | | |
| 12 51 23 | 11 30 | 52 0 | 18 18 | | |
| 12 54 10 | 10 30 | 52 3 $\frac{1}{2}$ | 18 18 | | |
| 12 55 29 | 10 0 | 52 6 $\frac{1}{4}$ | 18 18 | | |
| 12 58 12 | 9 0 | 52 9 $\frac{3}{4}$ | 18 18 | | |
| 13 0 42 | 8 0 | 52 13 | | | |
| 13 6 13 | 6 0 | 52 18 | 18 18 $\frac{1}{2}$ | | |
| 13 8 45 | 5 0 | 52 20 $\frac{1}{2}$ | 18 18 $\frac{1}{2}$ | | |

In hisce obseruationibus ☾ non fuit satis serenum.

1 22 9 Fuit occident. limb. ☾ in Merid. & habuit superior limbus Alt. per Q. 52 26

1 24 14 Fuit orient. limbus ☾ in Meridiano etiam per Q. Volubilem.

Ex differentia transitus limbi vtriusque ☾ 2^m 5^m colligitur Diameter ☾ 31 $\frac{1}{4}$.

Horologium in Meridie 20 scrupulis
secundis saltem iusto tardius moue-
batur. Nocte proxime antecedenti ad
stellas verificatum est.

DIE 23 NOUEMBRIS.

H. 8 0' A. M. ☾ in 90 Gr. ab Ascend.
Hora 5½ Horologium verificatum est
ad stellas.

5 44' 23" Orient. limb. ☾ in Merid.
Altit. super. cornu 40 24½
infer. cornu 39 52½
Diameter ☾ 0 32

Postea obseruabatur ☾ appropin-
quans 90 Gradui in hunc modum.

7 28½ Declin. superioris
cornu ☾ 5 59½

7 29¾ Declin. inferior.
cornu 5 28½

Diameter in declina-
tione apparens 0 31½

7 31 Repetita decl. sup. 5 59½

7 31½ Infer. cornu 5 28

Diameter app. in
declinat. 0 31½

Hinc colligitur declinationem cen-
tri ☾ fuisse iuxta hoc tempus 5 44 B.

| | Cor ☾ occid. | ☾ limb seq. occ. | Dist. æquat. |
|-------|-----------------|---------------------|-----------------|
| 7 34½ | 36 1½ | 26 39½ | 9 22 |
| 7 35½ | 36 23 | 27 1 | 9 22 |
| 7 37½ | 36 49¾ | 27 25 | 9 24½ |
| 7 38½ | 37 4 | 27 37½ | 9 26½ |

dubia

Pone hic dist. æquat. 9 26

7 40 45" 37 38½ 28 13 9 25½

aurora

7 42 20 38 2¾ 28 37¾ 9 25

Pone H. 7 M. 40 dist. æquat. 9 25

7 44½ Declin. super.

cornu ☾ 5 57

7 45½ Declin. infer. cornu 5 25

Diameter apparens 32

Ergo declinatio centri ☾ B. 5 41

Postea obseruabatur ☾ ad ♄, quia
propter auroram fixæ non bene am-
plius apparebant, obseruabatur au-
tem in distantijs per Sextantem, eo

quod Armillarum in tali situ usus esse
non poterat.

7^H 50½^M Inter ♄ et or.

limbum ☾ 52 5

7 51½ Eadem repet. 52 5½

7 52½ Eadem repetita 52 6

7 53½ 52 7

7 54 52 8

7 55 52 8½

7 56 52 9

7 57½ 52 9½

7 59 52 10

8 0 52 10½

8 1½ Fuit declin.

super. cornu ☾ 5 54

8 2 Declin. inferioris 5 24

Diameter apparens 0 30

Ergo declin. centri ☾ Bor. 5 39

8 4 Rursus inter ♄ 52 13

8 5½ & or. limb. ☾ 52 13¾

8 6½ Eadem repetita 52 14½

8 7½ 52 14½

8 8½ 52 15

Deinde pro verificatione horologii
obseruabatur ♄ in hunc modum.

8 12 ♄ a Merid. 87 4^{occ.}

8 13½ 87 32

8 14½ 87 47

8 15½ 87 58

Circa hæc tempora ☉ oriebatur.

8 20 Medium de corpore Solis
oriebatur.

Sed hinc horologium corrigi ex-
acte nequit ob refractionem solarem.

| Tempus | Dist. æquat. centri ☉ & or. limbi ☾ | Decl. ☉ austr. | Alt. super. cornu ☾ | Altit. ☉ |
|----------|---|-------------------|------------------------|-------------|
| 10 58 55 | 91 54 | 22 5½ | 11 42 | 10 50 |
| 11 3 53 | 91 53 | 22 5½ | 11 0 | 11 0 |
| 11 6 22 | 91 50 | 22 5½ | 10 40 | 11 10 |
| 11 8 40 | 91 49 | 22 5½ | 10 32 | 11 15 |

Sed his distantijs æquatorijs non
nimium erit in ipsa scrupulositate fi-
dendum.

H. 11 M. 11 Declin. ☾ 5 19 super. cornu
4 51½ infer. cornu

Diameter apparens 0 27½.

Deinde per Armillas posito loco
☉ in 10^g 30' ♄^λ qualem declinatio visa

exhibebat, obseruabatur ☾ per Armillas Zodiacales vt sequitur in orientali limbo.

| | Locus ☾ in orient. limbo | visus ☉ | Altitudo ☉ | Alt. super. cornu ☾ |
|-----------------------------------|-------------------------------------|------------|---------------|------------------------|
| 11 ^H 18 ^M | 6 50 ¹ / ₂ mp | 11 30 | 9 6 | |
| 11 20 | 6 51 | 11 35 | 8 40 | |
| 11 21 ¹ / ₂ | 6 51 ¹ / ₂ | 11 40 | 8 20 | |
| 11 23 ¹ / ₂ | 6 52 ¹ / ₂ | 11 45 | 8 15 | |
| 11 25 ¹ / ₂ | 6 53 ¹ / ₂ | 11 50 | 8 5 | |
| 11 26 ¹ / ₂ | 6 55 | 12 0 | 7 50 | |
| 11 28 ¹ / ₂ | 6 55 ¹ / ₂ | 12 5 | 7 40 | |
| 11 29 ¹ / ₂ | 6 57 | 12 10 | 7 30 | |

Altitudines ☉ accipiebantur per Q. minimum. ☾ vero per Q. Volub. Azimutalem & vbique praelupponebatur longitudo ☉ in 10 30 ¹/₂.

H. 11 33' Decl. ☉ vno pinnac. 22 5¹/₂

Decl. ☉ altero pinnac. 22 6

Potest locus ☾ accipi duobus scrupulis posterior.

Horologium in Meridie saltem vnico scrupulo exacte tardius iusto mouebatur, qui error illi ab H. 5¹/₂ matutina hucusque competeat.

Anno 1586 D. 23 Novemb. Mane

H. 7 M. 55 ☾ in 90°. ¹

H. 7 M. 42 Ascensio recta

☾ a Corde ☉ 155 44

H. 7 M. 54 Ascensio recta

☾ a ☿ 155 50

Qvæ satis bene ratione intervalli conveniunt.

Ergo ad ult. Asc. rectam data declinatione B. Centri 5° 41' Resp.

Longit. 5 32¹/₂ mp

Subt. pro latit. 6 50

Vera longit. 5 25¹/₂

DIE 24 NOUEMBRIS.

H. 7¹/₂ horologium duobus tantum minutis a Meridie proximo correctum iusto tardius moveri ex distantia cordis ☉ a Meridie visum est, sed illud tunc permanere in sua revolutione permittimus.

¹ E codice V.

Postea obseruabatur ☾ a ☿ per armillas Zodiacales in hunc modum. H. 7 54' Posito loco ☿ in 13 41 ☉ videbatur orientalis limbus ☾ in 19 59¹/₂ mp, fuit tunc Declin. ☾ in superiori limbo

1 33

in inferiori limbo 1 3

Et Alt. super. cornu 33 21

H. 7 57' ☾ a ☿ vt prius 20 1 mp

Altitudo ☾ tunc 33 20

Alt. ☿ erat 21 12

7 59¹/₂ ☾ a ☿ vt prius 20 3 mp

8 1 ☾ vt prius a ☿ 20 3¹/₂ mp

Fuit tunc Declin.

super. cornu 1 32¹/₂

Decl. infer. limbi 1 2¹/₂

Diameter appar. 0 30

Alt. ☿ tunc erat 20 48¹/₂

Alt. ☾ 32 50

8 5¹/₂ ☾ a ☿ vt prius in 20 5¹/₂ mp

Declin. super. cornu 1 32¹/₂

Inferioris limbi 1 2¹/₂

Diameter 30

Alt. super. cornu ☾ 32 34

Alt. ☿ 20 25

8 9¹/₂ ☾ a ☿ vt prius 20 7¹/₂

Declin. superioris cornu 1 31

infer. cornu 1 1¹/₂

Diam. 30

Alt. superioris cornu 32 21¹/₂

Alt. ☿ 19 55

8 13¹/₂ ☾ a ☿ vt prius in 20 9¹/₂ mp

Declin. super. cornu 1 30

Inferioris 1 0¹/₂

Alt. super. cornu 32 10

Alt. ☿ 19 0

☾ applicante ad 90 Gra. a ☿ vlterius obseruabatur in hunc modum.

| | Locus or. armill. mp | Declinat. cornu | infer. | Alt. | sup. cor. ☾ |
|--|-------------------------|--------------------|--------|------|----------------|
|--|-------------------------|--------------------|--------|------|----------------|

8 20¹/₂ 20 10¹/₂ 1 27 0 59 31 31 18 30

8 23 20 11¹/₂ 1 26 0 58 31 17 18 5

8 24¹/₂ 20 13 1 26 0 58 31 10 17 40

8 26¹/₂ 20 14 1 25 0 57

8 21 ☉ Medius oriebatur.

Deinde pro verificando horologio obseruabatur ☿ a Meridiano distantia, idque propter sequentes ☾ Azi-

mutales obseruationes, vt tempus exacte ijs adaptari & error horologij limitari queat.

Nota. Locus autem ☿ accipi potest e præcedentibus obseruationibus.

$8^h 29^m 20''$ ☿ *versus occ.* 92 47 $\frac{3}{4}$

8 30 57 93 8

8 32 32 93 31

Hinc poterit verificari tempus, sed conferatur error horologij in Meridie sequente, qui provenit interuallo a Meridie antecedente, & huic potius fidendum. Nam ☿ obseruabatur solutus Armillis, quod non satis est exactum.

| Tempus | | | Azim. or. | | Alt. super. | | Alt. infer. | |
|--------|----|----|----------------|----|-------------|------------------|-------------|------------------|
| | | | lim. ☿ ad occ. | | cornu | | cornu ☿ | |
| H | M | s | G | M | G | M | G | M |
| 8 | 38 | 3 | 35 | 30 | 30 | 18 $\frac{1}{2}$ | | |
| 8 | 40 | 6 | 36 | 0 | 30 | 8 | 29 | 34 |
| 8 | 43 | 55 | 37 | 0 | 29 | 49 $\frac{3}{4}$ | 29 | 16 $\frac{1}{2}$ |
| 8 | 47 | 49 | 38 | 0 | 29 | 29 $\frac{3}{4}$ | 28 | 55 $\frac{1}{4}$ |
| 8 | 51 | 44 | 39 | 0 | 29 | 9 $\frac{1}{3}$ | 28 | 35 $\frac{1}{4}$ |
| 8 | 55 | 37 | 40 | 0 | 28 | 48 $\frac{3}{4}$ | 28 | 15 $\frac{1}{6}$ |
| 8 | 59 | 42 | 41 | 0 | 28 | 27 $\frac{1}{2}$ | 27 | 53 |
| 9 | 3 | 40 | 42 | 0 | 28 | 5 | 27 | 30 $\frac{1}{2}$ |
| 9 | 7 | 44 | 43 | 0 | 27 | 41 $\frac{3}{4}$ | 27 | 8 $\frac{3}{4}$ |
| 9 | 11 | 53 | 44 | 0 | 27 | 17 $\frac{1}{2}$ | 26 | 44 $\frac{1}{4}$ |
| 9 | 15 | 48 | 45 | 0 | 26 | 55 $\frac{1}{2}$ | 26 | 24 |

| Tempus | | | Diff. æquat. | | Decl. ☿ | | Alt. ☿ | | Alt. sup. | |
|--------|------------------|--|------------------------|------------------|---------|------------------|-------------|----|---------------------|------------------|
| | | | or. limbi ☿ & centri ☿ | | ☿ M. | | per Q. Min. | | cornu per Q. v. Az. | |
| 10 | 19 $\frac{1}{3}$ | | 80 | 1 | 22 | 11 $\frac{1}{4}$ | 9 | 0 | 19 | 59 |
| 10 | 21 $\frac{5}{6}$ | | 79 | 59 $\frac{1}{2}$ | 22 | 11 $\frac{1}{4}$ | 9 | 10 | 19 | 43 $\frac{1}{2}$ |
| 10 | 26 $\frac{2}{3}$ | | 79 | 57 $\frac{1}{2}$ | 22 | 11 $\frac{1}{2}$ | 9 | 15 | 19 | 10 |
| 10 | 29 $\frac{1}{2}$ | | 79 | 56 $\frac{3}{4}$ | 22 | 11 $\frac{2}{3}$ | 9 | 23 | 18 | 52 |
| 10 | 33 | | 79 | 55 $\frac{3}{4}$ | 22 | 11 $\frac{3}{4}$ | 9 | 30 | 18 | 27 |

H. 10 $\frac{1}{2}$ Declin. ☿ obser. 22 11 $\frac{3}{4}$, respondet locus ☿ apparens 11 13 \times , in quo posito loco Solis obseruabatur ☿ per Armillas zodiacales.

H. 10 42 $\frac{3}{4}$ Locus ☿ orient. limbus visus est 20 22 $\frac{1}{4}$ \mathbb{M} , Alt. ☿ 10 0, Alt. super. cornu ☿ 17 19.

Rurfus per æquatorias Armillas ☿ a ☿

| Tempus | | | Diff. æquat. | | Decl. ☿ | | Alt. ☿ | | Alt. infer. | |
|--------|-----------------|--|------------------------|------------------|---------|------------------|--------|----|-------------|------------------|
| | | | or. limbi ☿ & centri ☿ | | ☿ | | ☿ | | limbi ☿ | |
| 10 | 56 | | 79 | 46 | 22 | 12 $\frac{1}{2}$ | 10 | 40 | 15 | 0 |
| 11 | 0 $\frac{1}{2}$ | | 79 | 45 $\frac{1}{4}$ | 22 | 12 $\frac{1}{2}$ | 10 | 45 | 14 | 47 |
| 11 | 4 $\frac{2}{3}$ | | 79 | 43 | 22 | 13 | 10 | 50 | 14 | 15 $\frac{1}{2}$ |

Declinationi ☿ obseruatæ 22 13 respondet locus Solis visus in 11 22 \times , hinc obseruatus est

| Locus ☿ in or. | | | | Alt. ☿ per | | Alt. infer. | |
|---------------------------|----|----|----------------------------------|------------|----|---------------------------|------------------|
| limbo per Armill. Zodiac. | | | | Q. min. | | limbi ☿ per Q. Vol. Azim. | |
| 11 | 9 | 25 | 20 40 $\frac{1}{2}$ \mathbb{M} | 11 | 0 | 13 | 37 |
| 11 | 12 | 10 | 20 41 | 11 | 2 | 13 | 17 $\frac{1}{4}$ |
| 11 | 15 | 5 | 20 43 | 11 | 10 | 12 | 51 $\frac{1}{2}$ |
| 11 | 17 | 45 | 20 44 $\frac{1}{2}$ | 11 | 15 | 12 | 33 |
| 11 | 19 | 24 | 20 46 | 11 | 17 | 12 | 20 |

H. 11 M. 21 Declin. Solis Merid. 22 13 $\frac{1}{2}$.

Alt. ☿ 11 20, resp. Locus ☿ 11 26 \times , Hinc rurfus posito loco ☿ in 11 26 \times

| Tempus | | | Locus ☿ obseruatus in | | Alt. ☿ | | Alt. infer. | |
|--------|----|----|-----------------------|-------------------------------|--------|----|-------------|------------------|
| | | | or. limbo | | ☿ | | limbi ☿ | |
| 11 | 26 | 30 | 20 | 53 $\frac{3}{4}$ \mathbb{M} | 11 | 30 | 11 | 29 $\frac{1}{2}$ |
| 11 | 29 | 50 | 20 | 55 | 11 | 34 | 11 | 3 $\frac{1}{2}$ |
| 11 | 32 | 40 | 20 | 57 | 11 | 37 | 10 | 41 |
| 11 | 34 | 50 | 20 | 58 $\frac{1}{2}$ | 11 | 40 | 10 | 22 $\frac{1}{2}$ |
| 11 | 38 | 34 | 20 | 59 | 11 | 45 | 9 | 54 |
| 11 | 41 | 30 | 21 | 0 | 11 | 47 | 9 | 30 |
| 11 | 44 | 10 | Repetita declin. | | | | | |

☿ vno pinnacidio 22 13 $\frac{1}{2}$

Resp. Locus ☿ appar. in

11 26 \times

Altero pinnacidio 22 13 $\frac{3}{4}$

Resp. Locus ☿ 11 27 \times

Postea ☿ rurfus obseruabatur.

H. 11 53 $\frac{1}{4}$ Posito loco ☿ in 11 30 \times videbatur ☿ limbus orientalis 21 13 $\frac{1}{4}$ \mathbb{M} . Alt. infer. limbi ☿ 7 40

H. 11 56 $\frac{2}{3}$ Luna a Sole vt prius 21 11

dubia

11 59 $\frac{3}{4}$ Luna a Sole vt prius 21 17 \mathbb{M}

Alt. ☿ infer. limbi 7 20

Nota. Horologium in Meridie celestius iusto mouebatur 5' 57'', qui error a Meridie antecedentis diej venit limitandus. Hincque tempora Azimutalium obseruationum possunt corrigi.

Nota. Ex hac obseruatione ☿ ad stellas et postea ☿ ad Solem, habita ratione parallaxeos Lunaris, potest longitudo Solis ad Solstitium hybernum applicantis indagari &c.

DIE 28 NOUEMBRIS.

H. 7 15' 50" Cor Ω occident. 42 21
 7 17 47 42 52
 7 18 35 43 2 $\frac{1}{2}$

Hinc poterit verificari horologium,
 & colligitur quod horologium M. 22 $\frac{1}{2}$
 iusto tardius ibat.

N. B. Tempora assignata sunt verifi-
 cata.

H. 7 45' 45" posito loco cordis Ω in
 24 7 Ω obseruabatur orient. lim-
 bus ζ in 18 3 $\frac{1}{2}$ M
 Tunc fuit declin.

super. cornu 15 5 M.
 Alt. infer. limbi ζ 12 40
 Pone hic locum

or. limbi ζ 18 3 $\frac{1}{2}$ M

H. 7 49' 30" posito corde Ω vt prius
 fuit locus orient. limbi ζ 18 4 M
 Declin. super. limbi 15 15 M.
 Alt. infer. limbi 13 5

H. 7 52' 45" Posito loco cordis Ω vt
 prius obseruabatur or. limbus
 18 4 $\frac{1}{2}$ M

Tunc Alt. infer. limbi ζ 13 23

Hinc poterit verificari locus visus
 ζ , qui postea ad Solem applicatus
 Solis locum ad Solstitium appropin-
 quantis manifestabit.

Horologium in Meridie proxime
 sequente 0' 3" tantummodo iusto ve-
 locius circumuoluebatur, quod erat
 insensibile. Fuit autem mane ex di-
 stantia cordis Ω a Meridiano verifi-
 catum circa Horam 8.

Verus locus cordis ad finem No-
 uembris 86 24 3 28 Ω

Locus aBumpt. 24 7 Ω

Diff. 3 32

Apparet ergo locum cordis aBump-
 tum 3' 32" maiorem esse iusto. Quare
 etiam 3' 32" detrahenda veniunt a
 loco orientalis limbi obseruato, vt sit
 in 18 0 13 M. Hinc verus locus centri
 Lunaris 17° 45' 13" M. Decl. centri ζ 15°
 20' M. Lat. sept. 1° 51' 48".

H. 7 49 $\frac{1}{2}$ ' 17° 45' 28" M
 7 52 $\frac{3}{4}$ ' 17 45 58 M

DIE 29 NOUEMBRIS A. M.

H. 7 39' (corr.) Posito loco cordis Ω in
 24° 7' Ω obseruabatur or. limbus
 ζ in 2 25 $\frac{3}{4}$ \times ¹, incerta. Tunc fuit
 Alt. infer. limbi ζ 5 0.

H. 7 43 $\frac{1}{2}$ Posito loco cordis Ω vt prius,
 fuit visus locus orient. limbi ζ in
 2 31 \times ¹, Altitudo 5 29.

Manente cordis Ω loco vt prius ob-
 seruabatur.

| | Or. limbus ζ in | Alt. infer. lim. |
|----------------------------|--|---------------------|
| 7 46 | 2 32 $\frac{1}{2}$ \times ¹ | 5 37 $\frac{1}{2}$ |
| 7 48 $\frac{1}{2}$ | 2 33 $\frac{3}{4}$ | 5 52 $\frac{1}{2}$ |
| 7 50 $\frac{3}{8}$ | 2 35 $\frac{1}{4}$ | 6 5 |
| 7 53 | 2 36 $\frac{1}{2}$ | 6 15 $\frac{1}{2}$ |
| 7 42 29" Cor Ω occ. | | 48 27 |
| 7 44 56 | | 49 1 |
| 7 45 35 | | 49 14 $\frac{1}{4}$ |

Hinc colligitur errorem horologii cir-
 ca hoc tempus fuisse M. 14 35" tardius
 eundo. Hinc verificatur horologium.

Error correctus est in antecedenti-
 bus.

Loca correctæ lunæ d. 29. Nou.²

| | |
|------------------|---------------------------------|
| H. 7 39' | 2° 7' 13" \times ¹ |
| 43 $\frac{1}{2}$ | 2 12 28 |
| 46 | 2 13 58 |
| 48 $\frac{1}{2}$ | 2 15 13 |
| 50 $\frac{2}{8}$ | 2 16 43 |
| 53 | 2 17 58 |

DIE 1 DECEMBRIS P. M.

Obseruabatur Luna recens e Sole
 digressa.

| | | |
|-------------------------|--|---------------------|
| H. 4 45 $\frac{1}{2}$ ' | } Inter φ & corr. 42' 43" } occ. limb. ζ | 32 2 $\frac{1}{2}$ |
| | | |
| | Alt. infer. limbi ζ | 2 30 |
| | Decl. infer. limbi | 19 12 |
| | super. | 18 43 |
| 4 47 $\frac{3}{4}$ | } Inter φ & ζ corr. 44' 58" } Alt. inf. limbi | 32 1 |
| | | 1 53 |
| 4 48 $\frac{5}{8}$ | } Inter φ & ζ corr. 46' 3" } Alt. inf. limbi | 32 0 |
| | | 1 45 |
| | Decl. infer. limbi | 19 11 $\frac{1}{8}$ |

¹ Annotatio quæ sequitur longe postea in codice M conscripta est.

² E codice M.

| | | |
|--------------------|--------------------|---------------------|
| 4 50 | } Dist. vt prius | 31 59 $\frac{1}{4}$ |
| corr. 47' 13" | } Alt. inf. limbi. | 1 36 |
| | Decl. infer. limbi | 19 10 $\frac{1}{2}$ |
| 4 52 $\frac{1}{2}$ | } Dist. occ. limbi | |
| corr. 49' 43" | } ☾ & ♀ | 31 57 $\frac{3}{4}$ |
| | Alt. infer. limbi | 1 20 |
| | Decl. infer. limbi | 19 10 |

Luna erat tunc admodum recens, sed cauenda erit tam parallaxis quam refractio in tam declinui situ, tempusque ex sequentibus verificandum, tum etiam locus ♀ ex observationibus ipsius a lucida ☿.

Loca ☾ die 1 Decembris¹.

| | | |
|-----------------------------------|-----------------------|----|
| 4 ^H 42' 43" Lunæ Decl. | 18° 57' | M. |
| Afc. Recta | 274 55 21" | |
| Longitudo | 4 40 11 $\frac{1}{2}$ | |
| Latitudo | 4 30 | S. |
| 4 47 13 Decl. | 18 55 30 | M. |
| Afc. Recta | 275 0 31 | |
| Long. | 4 45 6 $\frac{1}{2}$ | |
| Lat. | 4 31 | S. |

| | | |
|---------------|-----------------------|----|
| 4 49 43 Decl. | 18 55 | M. |
| Afc. Recta | 275 1 41 | |
| Long. | 4 46 17 $\frac{1}{2}$ | |
| Lat. | 4 31 $\frac{1}{2}$ | S. |

DIE 2 DECEMBRIS P. M.

| | | |
|--|------------------|------------------------|
| Horol. | | |
| Min. 4 ^H 32 $\frac{1}{2}$ ' | } Inter ♀ & occ. | |
| Mai. 4 50 $\frac{1}{2}$ ' | } limbi. ☾ | 19 52 $\frac{1}{2}$ |
| <i>Fuit tunc altit. infer. limbi ☾ 8$\frac{1}{2}$°.</i> | | |
| Min. 4 36 | } Inter ♀ & ☾ | 19 52 $\frac{1}{2}$ |
| Mai. 4 53 $\frac{3}{4}$ | } Alt. inf. lim. | 8 19 |
| Min. 4 38 $\frac{3}{4}$ | } Inter ♀ & ☾ | 19 51 |
| Mai. 4 57 | } Alt. inf. lim. | 8 10 |
| Min. 4 40 $\frac{3}{4}$ | } Decl. infer. | |
| Mai. 4 59 | } limbi | 18 10 $\frac{1}{2}$ M. |
| Min. 4 42 | } Declin. super. | |
| Mai. 5 0 $\frac{1}{2}$ | } cornu | 17 43 $\frac{1}{2}$ |
| | } Differentia | 0 27 |

DIE 2 DECEMBRIS¹.

Hora putativa 4^H40^M45". Cum ex obseruatis seqq. huius diej per declin. inuenta sit diameter ☾ ≈ 27', ablato semid. 13' 30" a dist. ☾ & ♀^{is} manebit dist. centri ☾ & ♀ 19° 39'. Altitudo centri 8° 43' 30". Post 8' 15" temp. obseruabatur decl. centri ☾ 17° 56' 40", & quia alt. ☾ a prima ad vltimam obseruationem decrescat 20' spatio 6' 10" temporis, sit ad tempus obseruationis declinationis, quod a prima altitudine obseruata distat 8' 15" temporis, Alt. ☾ 26' 45" minor, quam erat in prima obseruatione, ergo erat alt. centri ad tempus obseruatæ declinationis 8° 17' 45"². Quia vero etiam 3' 30" temp. a prima ad secundam obseruationem distantia ♀^{ris} a ☾ distantia deprehensa est decrescere 15", decrescet vtique 8' 15" temporis 35", vt hac ratione tempore obseruatæ declinationis distantia ♀^{ris} & centri ☾ ≈ sit 19° 38' 25". Per diurnum etiam ♀^{ris} 66' promota erit ♀ a prima obseruatione ad hanc vltimam 8' 15" temp. 23", cum prius eſſet in 7° 26' 2" ≈ erit iam in 7° 26' 25" ≈.

Pridie huius diej cum ♀ eſſet in 6° 22' 38" ≈ erat eius decl. ex obseruat. 20° 51' 15" M., iam cum 1° 4' progredi fuerit, quia declin. partium Eclipticæ a 6° 22' 38" ad 7° 26' 25" ≈ decreſcat 16' 6", ponam declinationem ♀ totidem decreuiſſe, vt sit ad data superiora Decl. ♀ 20° 35' 9". Aſcenſio Recta 289° 13' 52". Latitudo ☾ inuenta est 4° 21' 46" S., Long. 18° 19' 40" $\frac{1}{2}$. Dist. ☾ a Merid. Æquat. 41° 29', quæ ad A. R. ☾ ≈ addita exhibet A. R. Medij Cœli 330° 42' 52", ex qua an recte se habeat putatium tempus probandum est. Verus locus ☉ ad datum tempus anni 86 Dec. 2, H. 4 40' 45" p. m. est 20° 23' 29" \times . Huius A. R. 259° 32' 17", A. R. Temporis 70° 11' 15", hinc A. R. M. C. 329° 43' 32", iusto minor 1° 0', quod in tempore facit 4', quibus horologium minus hoc die tardius ibat.

¹ E codice M.

² Sic in codice.

Eodem die H. corr. 4 42 40 erat AR ♀ 309° 51' 46'', AR ☾ 289° 13' 46'', Decl. 17° 56' 40''. Ergo Lat. ☾ 4° 21' 48'' S., Long. 18° 18' 56'' Z.

DIE 7 DECEMBRIS.

☾ in 90 gradu circa horam 3 M. 20. Obseruabatur postea in Azimutis & altitudinibus, siquidem nullæ stellæ ob diei & crepusculi lumen adhuc apparebant, bene verificato instrumento.

| Tempus | Azimut. occ. limbi | Altitud. super. cornu |
|-------------------------------------|--------------------|-----------------------|
| 3 ^H 15 ^M 40'' | 41 0 or. | 24 46 $\frac{1}{2}$ |
| 3 19 37 | 40 0 | 25 8 $\frac{3}{4}$ |
| 3 21 33 | 39 30 | 25 20 |

Tunc erat declin. super. cornu ☾ 1 58 $\frac{1}{2}$ M.
Infer. cornu 2 27 $\frac{1}{2}$ M.
0 29
3 25 $\frac{1}{2}$ Declin. super. cornu 1 59
2 27 $\frac{1}{2}$
0 28 $\frac{1}{2}$

Nota. Hæ obseruationes in ☾ erant satis bonæ nisi quod tempus sit verificandum ad stellas, postea erat autem horologium mediocriter bene correctum in Meridie, licet ☉ non satis lucidus apparebat interuenientibus subinde nubibus.

Nota. Post nouam correctionem quadrantis in libella vtrinque videbatur quod indices non exacte per Diametrum sibi respondebant deficiente saltem in singulis vnico scrupulo primo, qui error postea est limitatus.

| Tempus | ♀ a mer. occ. | Inter occ. limb. ☾ & ♀ dist. æquat. | Altitud. ☾ | Alt. ☾ inf. cor. |
|---------|---------------------|-------------------------------------|------------|---------------------|
| 3 45 50 | 6 57 $\frac{1}{4}$ | 36 16 $\frac{1}{4}$ | | |
| 3 51 10 | 8 23 | 36 17 $\frac{1}{6}$ | 15 0 | 27 21 $\frac{1}{2}$ |
| 3 56 25 | 9 45 $\frac{1}{2}$ | 36 19 | 14 30 | 27 49 |
| 4 1 2 | 10 55 $\frac{1}{2}$ | 36 20 | 14 15 | 28 7 $\frac{3}{4}$ |
| 4 4 12 | 11 46 $\frac{3}{4}$ | 36 21 $\frac{1}{2}$ | 14 0 | 28 23 |

Vbique obseruabatur in altitudine inferior limbus ☾.

3^H 45' 50''¹. Tempus correctum 3^H 51' 24''.

¹ E codice M.

² E codice V

Decl. ♀ 18° 52' 51''

AR ♀ 45 40 9

AR ☾ 352 10 43

Lat. ☾ 1 8 S.

Verus locus ☾ 21 57 45) (

Pro loco ☾ ex Obseruationibus ejus ad Diem 7 Decembris a ♀².

H. 3 M. 6 ☾ in nonages. gradu Eclip.

H. 3 M. 48 Distantia Centri

☾ a ♀ 36 32

Ascensio recta ♀ reducta

ex obseruatione 315 40

Ergo Ascensio recta ☾ 352 12

Declinatio M. 2 10

Resp. Longitudo 21 57 $\frac{1}{2}$) (

Latitudo 1 5 $\frac{1}{2}$ Sept.

Parallaxis addenda 4' 20''

Pro arcu inclinationis subtr. 5 0

Ergo vera longitudo ☾ 21 57) (ponenda, idque absque fere sensibili errore.

Revisio.

Ex data altitudine 15

♀ et declinatione 18 53 M

item Ascens. recta 315 40

Ascens. recta ☾ 265 2

invenitur angulus distant.

6 28 H. 3 M. 51.

Ergo tunc fuit tempus H. 3 M. 48 $\frac{3}{4}$, ut error aliquis sit in Horolog. et antiqua temporis correctione.

Correctis autem ☾ obser. erit Longit. 22° 0') (H. 3 M. 48 exacte.

DIE 27 DECEMBRIS.

H. 7 M. 47 Decl. super. cornu ☾ 18 34 $\frac{1}{2}$

infer. 19 2 $\frac{1}{4}$

Alt. infer. cornu limbi 11 57

DIE 31 DECEMBRIS.

Post horam 4 apparebat ☾ noua & obseruabatur a ♀ in hunc modum.

| | Inter ♀ & occ. limb. ☾ | Decl. infer. limbi | Alt. infer. limbi |
|--------------------|---------------------------|-----------------------|----------------------|
| 4 ^H 17' | 26 37 | | |
| 4 20 | 26 35 $\frac{2}{3}$ | 14 27 Mer. | 11 $\frac{1}{2}$ |
| 4 23 | 26 33 $\frac{1}{2}$ | 14 26 | 10 50 |
| 4 27 $\frac{3}{4}$ | 26 31 $\frac{1}{2}$ | 14 25 $\frac{2}{3}$ | 10 $\frac{1}{8}$ |

Nota. Hæ obseruationes in ☾ noua quoad tempus limitandæ sunt, nam horologium in Meridie antecedente

celerius promotum erat 9 $\frac{1}{2}$, idque a mane antecedentis diej cum per arc-turum erat correctum, ideo ex se-quentibus obseruationibus hac die ad stellas factis limitanda & corri-genda erit horologij proportio in his præsertim quæ ad lunæ locum per-tinent, habenda insuper ratio refrac-tionis & parallaxeos.

OBSERUATIONES SATURNI.

DIE 13 JANUARIJ.

| | | | |
|-------------------------------------|-----------------------|--------------------|-------------|
| 7 ^H 3 ^M P. M. | Dift. inter ♄ & 50 | 18 $\frac{1}{2}$ | } bo- næ |
| 7 8 | oculum ☿ per 50 | 18 | |
| 7 11 | Sext. Δ | 50 18 | |
| 7 17 $\frac{1}{2}$ | Declin. ♄ per Armill. | 3 13 B. vno | |
| | altero pinn. | 3 12 $\frac{1}{2}$ | |

DIE 23 SEPTEMBRIS A. M.

| | | | |
|--------------------|------------------------|-------------------------|---------------------|
| H. 4 15' A. M. | Declin. ♄ | | |
| | per Armill. subterr. | 9 7 $\frac{1}{4}$ B. | |
| 4 24 | Dift. inter ♄ | I 12 47 $\frac{1}{2}$ | |
| 4 25 $\frac{1}{2}$ | & luc. ☿ per | II 12 47 $\frac{1}{2}$ | |
| 4 27 $\frac{3}{8}$ | Sext. Δ vet. | III 12 47 $\frac{1}{2}$ | |
| 4 30 | Repetita decl. ♄ | 9 7 $\frac{1}{4}$ | |
| | Alt. pinnac. | 9 7 $\frac{1}{2}$ | |
| | ♄ a meridie ad occ. | Oculus ☿ occid. | Dift. æquat. |
| 4 37 $\frac{1}{2}$ | 48 36 $\frac{1}{2}$ | 15 0 $\frac{1}{2}$ | 33 36 |
| 4 38 $\frac{1}{8}$ | 49 4 $\frac{1}{4}$ | 15 28 | 33 36 $\frac{1}{4}$ |
| 4 41 $\frac{1}{2}$ | 49 36 $\frac{1}{2}$ | 16 0 $\frac{1}{4}$ | 33 36 $\frac{1}{4}$ |

Pro loco ♄.

| | | |
|--------------------|---------------------|-----------------------|
| H. 4 $\frac{1}{2}$ | Differ. Asc. R. ♄ & | |
| | Aldeboræ | 33 36 |
| | Asc. R. Aldeboræ | 63 6 |
| | Asc. R. ♄ | 29 30 |
| | Declin. ♄ Bor. | 9 7 |
| Resp. | Longitudo ♄ | 0 38 $\frac{1}{8}$ ☿ |
| | Latitudo eiusdem | 2 37 $\frac{1}{8}$ M. |

Collatio inuenti loci cum calculo
Alphonfino & Coperniano

| ♄ | Ex obseruatione | Calc. Alph. | Calc. Coper. |
|--------------------|----------------------------|-------------|-----------------|
| H. 4 $\frac{1}{2}$ | Long. 0 38 $\frac{1}{8}$ ☿ | 3 3 ☿ | 0 42 ☿ |
| | Lat. 2 47 $\frac{1}{8}$ M. | 3 0 M. | 2 58 M. |

¹ Obseruationem Saturni die 23 Januarii factam infra inter obseruationes Mercurii inuenies.

DIE 24 SEPTEMBRIS A. M.

| | | | |
|----------------------|-----------------------|---------------------|---------------------|
| H. 1 20' ♄ in Merid. | Alt. | | |
| | per Quadr. Volub. | 43 13 $\frac{1}{2}$ | |
| | Declin. ex altitudine | 9 7 40 | |
| | Declin. per Armillas | 9 7 50 | |
| 3 37 | Repetita declin. ♄ | 9 6 $\frac{1}{2}$ | |
| | ♄ | Oculus ☿ | Dift. |
| | occid. | occid. | æquat. |
| 3 44 | 35 55 | 2 16 | 33 39 |
| 3 48 | 36 46 $\frac{1}{2}$ | 3 8 $\frac{1}{2}$ | 33 38 |
| 3 49 $\frac{1}{2}$ | 37 10 $\frac{1}{4}$ | 3 33 $\frac{1}{2}$ | 33 37 $\frac{1}{2}$ |
| 3 51 | 37 37 | 3 58 $\frac{3}{4}$ | 33 38 $\frac{1}{4}$ |

DIE 27 SEPTEMBRIS.

| | | | |
|---------------------------------------|----------------|--------------------------------|--------------------|
| 11 ^H 45 ^M P. M. | Declin. ♄ Bor. | per ar- millas subterraneas | 8 59 $\frac{1}{2}$ |
| 11 $\frac{1}{2}$ | Inter ♄ & | I 33 52 $\frac{1}{2}$ | |
| | oculum ☿ | II 33 52 $\frac{1}{2}$ | |
| | | III 33 52 $\frac{1}{2}$ | |

DIE 10 OCTOBRIS.

Obseruatio stellæ ♄ in ☿ Solis fere.

H. 7 34 Obseruata est declinatio ♄ per Armillas maiores subterraneas P. 8 M. 40 B. vtroque pinnacidio & capta est cum ipfius Altit. erat part. 18 $\frac{1}{2}$. Verum postea hora 9 $\frac{1}{2}$ cum altior erat ♄ stella, inuenta est per easdem Armillas ipfius declinatio Boreal. P. 8 M. 39 $\frac{1}{2}$ vno saltem pinnacidio. Poteris itaque absque sensibili errore vti de-claratione part. 8 M. 39 $\frac{1}{2}$, nisi quatenus posteriores obseruationes sint exacti-ores, siquidem ♄ sit iuxta Meridiem. Pro Ascensione vero recta ipfius ob-tinenda, obseruabatur per easdem Ar-

millas ipsius differentia ascensionalis a lucida stella Vulturis in hunc modum.

| | Vulturis Lucida occ. | Stella Saturni or. | Differ. æquat. |
|------|-------------------------|-----------------------|---------------------|
| 7 42 | 27 32 $\frac{3}{4}$ | 67 55 | 95 27 $\frac{3}{4}$ |
| 7 48 | 28 58 | 66 30 | 95 28 |

Erat autem Altitud. $\frac{1}{2}$ tum temporis Part 18 $\frac{1}{2}$ fere.

Sequentes obseruationes factæ sunt in maiori serenitate.

| | |
|------------------------------------|-------------------------|
| 11 23 Inter $\frac{1}{2}$ & extre- | I 29 55 $\frac{1}{6}$ |
| 11 25 mam alæ | II 29 55 $\frac{3}{4}$ |
| 11 27 Pegasi per | III 29 55 $\frac{1}{8}$ |
| 11 29 Sext. Δ | IV 29 55 $\frac{1}{8}$ |

Alt. $\frac{1}{2}$ 41 $\frac{5}{6}$ °.

| | |
|------------------------------------|---------------------|
| 11 36 Dist. inter $\frac{1}{2}$ & | 34 48 $\frac{1}{2}$ |
| oculum γ per Sext. Δ | 34 48 $\frac{1}{2}$ |

| | |
|---|--------------------|
| 11 42 Declin. $\frac{1}{2}$ per Armillas, vno pinn. 8 39 B. | |
| Altero pinnacidio | 8 38 $\frac{3}{4}$ |

Per Armillas subterr. maiores.

| | $\frac{1}{2}$ a Mer. ad ort. | Oculus γ orient. | Dist. æquat. |
|-------|---------------------------------|----------------------------|---------------------|
| 11 49 | 5 56 | 40 49 $\frac{1}{2}$ | 34 53 $\frac{1}{2}$ |
| 11 52 | 5 11 $\frac{1}{4}$ | 40 5 | 34 53 $\frac{3}{4}$ |
| 11 55 | 4 27 $\frac{1}{2}$ | 39 21 | 34 53 $\frac{1}{2}$ |

12 13 $\frac{1}{2}$ fuit $\frac{1}{2}$ in Meridiano habuitque Alt. per Q. Portatilem 42 44 $\frac{1}{2}$

Eodem instanti obseruabatur ipsius declinatio per Armillas subterraneas 8 39

Alt. pinnac. 8 39 $\frac{1}{2}$

| | |
|---|---------------------|
| H. 12 M. 26 $\frac{1}{2}$ ab oculo γ | 34 48 $\frac{3}{8}$ |
| 12 29 $\frac{1}{2}$ Eadem repetita | 34 48 $\frac{1}{2}$ |

Ponatur declinatio $\frac{1}{2}$ ni Boreal. exacte 8 $\frac{3}{4}$ 39 $\frac{1}{2}$ qualis per Armillas & Altitudinem ipsius Meridianam satis bene respondet & distantia ab oculo γ 34 48 $\frac{1}{2}$ qualis aliquoties iuxta Meridianum in sublimiori ipsius positu est obseruata, & hinc inquiratur differentia ascensionalis, quæ conferatur cum præcedenti obseruatione per Armillas maiores subterraneas habita vt locus $\frac{1}{2}$ ni exacte iuxta Solis oppositum constituitur examineturque.

| | $\frac{1}{2}$ occident. | Oculus γ or. | Dist. æquat. |
|---------------------------------|----------------------------|------------------------|--|
| 12 ^H 47 ^M | 8 28 $\frac{1}{2}$ | 26 24 $\frac{3}{4}$ | 34 53 $\frac{1}{2}$ } fere vt prius } |
| 12 51 | 9 21 $\frac{1}{4}$ | 25 32 $\frac{1}{8}$ | 34 53 25" |
| 12 53 | 9 53 30" | 24 59 30" | 34 53 0 |

DIE 11 OCTOBRIS.

Ad Vesperas.

H. 9 $\frac{1}{2}$ Horologium correctum est, nam 5' 24" a Meridie diei 10 iusto tardius conuoluebatur.

9^H35^M Declin. $\frac{1}{2}$ B. 8 37 $\frac{3}{4}$ vnico tantum pinnacidio, per Armillas.

9 48 Dist. inter $\frac{1}{2}$ & oculum γ 34 52 $\frac{1}{2}$

9 50 Eadem distantia 34 52 $\frac{1}{2}$ per Sext. Δ

Alt. $\frac{1}{2}$ 35°, Alt. oculi γ 24°.

9 55 Repetita Declin. $\frac{1}{2}$, vtroque pinnacidio 8 37 $\frac{1}{4}$

Per Armillas subt. maiores:

| | Lucida Vult. occ. | $\frac{1}{2}$ or. | Dist. æquat. |
|------|----------------------|---------------------|---------------------|
| 9 59 | 63 26 $\frac{1}{2}$ | 31 57 | 95 23 $\frac{1}{2}$ |
| 10 4 | 64 47 $\frac{1}{2}$ | 30 36 $\frac{1}{4}$ | 95 23 $\frac{1}{2}$ |

Per Armillas Maiores:

| | | | |
|--|------|---------------------|---------------------|
| 10 9 $\frac{1}{2}$ | 66 4 | 29 19 $\frac{1}{2}$ | 95 23 $\frac{1}{2}$ |
| 10 23 posito loco oculi γ in 4° 2' II | | | |
| obseruabatur per Armillas minores subt. locus $\frac{1}{2}$ in | | 29 16 \vee | |
| 10 30 Eiusdem locus | | 29 16 \vee | |
| 10 35 $\frac{1}{2}$ locus | | 29 16 \vee | |

DIE 13 OCTOBRIS.

Ad Vesperas.

| | |
|--|---------------------|
| 9 ^H 47 $\frac{1}{2}$ ^M Distantia inter $\frac{1}{2}$ & extremam alæ Pegasi | 29 42 $\frac{1}{2}$ |
| Repetita | 29 42 $\frac{3}{4}$ |
| 9 50 $\frac{1}{2}$ Eadem | 29 42 $\frac{1}{2}$ |

Per armillas mai. subterr.:

| | Lucida Vult. occid. | $\frac{1}{2}$ orient. | Differ. Ascens. R. |
|--------------------|------------------------|--------------------------|-----------------------|
| 9 54 | 63 54 | 31 20 $\frac{3}{4}$ | 95 14 $\frac{1}{2}$ |
| 9 56 $\frac{1}{8}$ | 64 26 $\frac{1}{2}$ | 30 48 $\frac{3}{8}$ | 95 14 $\frac{3}{8}$ |

Hæ duæ obseruationes præ cæteris maxime conuenire videntur cum antecedentium dierum & sequentium obseruationibus.

| | | | | |
|----|------------------|-------------------------|---------------------|---------------------|
| 9 | 59 $\frac{1}{2}$ | 65 20 | 29 56 | 95 16 |
| 10 | 1 $\frac{2}{3}$ | 65 53 | 29 24 $\frac{1}{2}$ | 95 17 $\frac{1}{2}$ |
| 10 | 3 $\frac{2}{3}$ | 66 21 | 28 55 | 95 16 |
| 10 | 6 | 67 26 | 27 49 $\frac{1}{2}$ | 95 15 $\frac{1}{2}$ |
| 10 | 12 | Declin. ζ Boreal. | 8 33 | |

vtroque pinnacidio

| | ζ orient. | Oculus γ orient. | Dift. æquat. |
|---------------------|---------------------|----------------------------|--------------------|
| 10 17 | 25 32 $\frac{1}{2}$ | 60 41 $\frac{1}{6}$ | 35 8 $\frac{2}{3}$ |
| 10 19 | 24 56 $\frac{1}{4}$ | 60 4 $\frac{3}{4}$ | 35 8 $\frac{1}{2}$ |
| 10 21 | 24 32 $\frac{1}{4}$ | 59 40 | 35 7 $\frac{1}{2}$ |
| 10 23 $\frac{1}{2}$ | 24 4 $\frac{1}{2}$ | 59 12 | 35 7 $\frac{1}{2}$ |

10 40 Posito loco Aldeboræ in 4° 2' II
visus est ζ in 29° 4' V

Quæ obseruatio ter præcise idem
ostendebat.

| | | |
|-------|--|---|
| 10 50 | Inter ζ & oculum γ per Sext. Δ | I 35 3 II 35 2 $\frac{2}{3}$ III 35 3 |
|-------|--|---|

12 1 $\frac{5}{8}$ ζ in meridie habuit Altit.
per Q. Volubilem 42 39 $\frac{5}{6}$

Eodem momento declin. ζ per
Armillas subterr. 8 33 $\frac{1}{2}$ B.
Altero pinnacidio 8 33 $\frac{2}{3}$

12 7 $\frac{1}{2}$ Dift. Aldebor.
a Merid. 33 40

Ergo Horologium ab eo tempore
quo cepimus obseruare hucusque 3 $\frac{1}{4}$
M. celerius iusto mouebatur.

DIE 14 OCTOBRIS.

| P. M. | Vult. lucid. occ. | ζ or. | Dift. æquat. |
|-----------------------------------|----------------------|--------------------|---------------------|
| 8 ^H 13 $\frac{1}{2}$ M | 39 8 $\frac{1}{2}$ | 56 2 $\frac{1}{2}$ | 95 11 |
| 8 16 | 39 44 | 55 26 | 95 10 |
| 8 17 $\frac{2}{3}$ | 40 7 $\frac{3}{4}$ | 55 3 | 95 10 $\frac{3}{4}$ |

Circa has obseruationes Alt. ζ 26 Gr.
per Q. minimum.

8 18 $\frac{5}{8}$ 40 29 54 43 95 12
8 23 Declin. ζ Bor. 8° 33' 35''

Alt. pinnacid. 8 33 30

8 34 Inter ζ & extremam 29 39 $\frac{1}{4}$
alæ Pegasi per

Sextantem II 29 39 $\frac{1}{6}$

H. 9 $\frac{1}{4}$ Inter ζ (Alt. 33°) 35 6 $\frac{1}{2}$
& oculum γ II 35 6

III 35 6 $\frac{1}{2}$

9 26 $\frac{1}{8}$ Declin. ζ Bor. 8 33

Non erat libera a nubibus.

| | | |
|--------------------|-------------------------|---------------------|
| 9 31 | Declin. ζ Bor. | 8 33 $\frac{1}{3}$ |
| | Altero pinnacid. | 8 33 |
| 9 39 $\frac{1}{2}$ | ζ orient. | 33 47 |
| | Oculus γ orient. | 68 59 $\frac{1}{2}$ |
| | Dift. æquat. | 35 12 $\frac{1}{2}$ |

Dehinc cælum continuo obduce-
batur nubibus.

DIE 16 OCTOBRIS.

| P. M. | Marcab occid. | ζ orient. | Dift. æquat. | Alt. ζ |
|--------------------|---------------------|---------------------|---------------------|-----------------|
| 9 54 | 18 34 | 28 0 $\frac{1}{2}$ | 46 34 $\frac{1}{2}$ | 38° |
| 9 58 $\frac{2}{3}$ | 19 44 $\frac{1}{2}$ | 26 51 $\frac{1}{2}$ | 46 36 | |

Stella erat in nubibus.

| | | |
|--------------------|----------------------|--------------------|
| 10 2 | Declin. ζ Bor. | 8 28 $\frac{1}{3}$ |
| 10 3 $\frac{1}{3}$ | Alt. pinnacidio | 8 28 $\frac{2}{3}$ |

| | ζ orient. | Aldeb. orient. | Dift. æquat. | Alt. ζ |
|---------------------|--------------------|---------------------|---------------------|-----------------|
| 10 9 $\frac{1}{2}$ | 24 12 | 59 32 $\frac{1}{4}$ | 35 20 $\frac{1}{4}$ | |
| 10 12 $\frac{1}{2}$ | 23 27 | 58 47 $\frac{1}{2}$ | 35 20 $\frac{1}{2}$ | |

In nulla harum obseruationum, quæ
hoc vespere factæ sunt, cælum erat
exquisite serenum.

DIE 18 OCTOBRIS.

H. 10 $\frac{1}{2}$ posito loco Vulturis in 26 0 ζ
obseruabatur ζ per I 28 32 V
Armillas Zodiacales II 28 32 V

Fuit autem tunc Alt. lucidæ Vultu-
ris quasi 15 p.

11 7 Decl. ζ B. 8 27 $\frac{1}{2}$ per Armill.
maior.

| | ζ orient. | Aldeb. orient. | Dift. ascens. |
|---------------------|--------------------|---------------------|---------------------|
| 11 11 $\frac{5}{8}$ | 6 41 | 42 11 $\frac{1}{2}$ | 35 30 $\frac{1}{2}$ |
| 11 15 | 5 42 | 41 12 $\frac{1}{4}$ | 35 30 $\frac{1}{4}$ |
| 11 19 $\frac{2}{3}$ | 4 56 $\frac{2}{3}$ | 40 27 $\frac{1}{6}$ | 35 30 $\frac{1}{2}$ |

11 38 $\frac{1}{3}$ Alt. ζ Merid. per
Q. Volubilem 42 31 $\frac{1}{3}$

DIE 19 OCTOBRIS.

Ad Vesperas, H. 8 $\frac{1}{8}$. Posito loco Vul-
turis lucidæ in 26 0 ζ , obseruabatur
locus ζ in 28 29 $\frac{1}{2}$ V, semel propter nus-
bes.

DIE 6 NOUEMBRIS.

H. 10 M. 16 ζ in Meridiano habuit
Alt. 42 2

Eodem tempore declinatio eiusdem
per Armillas maiores subterr. 7 57

| | | | |
|--|---------------------|------------------|---------------------|
| 11 ^H 34 ^M 0 ^S Inter ♄ & extrem. | 28 | 11 $\frac{1}{8}$ | |
| 11 35 55 alæ Pegasi | II 28 | 11 $\frac{1}{8}$ | |
| 11 38 10 Dist. inter ♄ | 36 | 53 $\frac{1}{2}$ | |
| 11 39 35 & oculum ☿ | 36 | 53 $\frac{1}{2}$ | |
| Declin. ♄ Bor. | 7 | 57 | |
| | ♄ | Oculus ☿ | Dist. |
| | occid. | or. | æquat. |
| 11 53 20 | 24 44 $\frac{1}{2}$ | 12 3 | 36 47 $\frac{1}{2}$ |
| 11 55 40 | 25 19 | 11 28 | 36 47 |
| 11 58 5 | 25 57 | 10 50 | 36 47 |

Pone hanc distantiam æquatoriam ♄ & oculi ☿ 36° 47 $\frac{1}{2}$.

Nota, Die 7 Nouembris. Horologium in hoc Meridie a præcedente 30 Minutis tardius iusto mouebatur, eo quod nimium de pondere præcedente die erat ablatum.

DIE 10 NOUEMBRIS.

| | | | |
|--|---------------------|---------------------|--------------------|
| 8 ^H 10 ^M Declin. ♄ B. vno pin. | 7 | 52 | |
| altero pin. | 7 | 52 $\frac{1}{2}$ | |
| | Oculus ☿ | ♄ | Dist. |
| | orient. | orient. | æquat. |
| 8 15 20 | 61 34 $\frac{1}{2}$ | 24 28 $\frac{3}{4}$ | 37 5 $\frac{3}{4}$ |
| 8 17 30 | 61 1 $\frac{1}{4}$ | 23 55 $\frac{1}{2}$ | 37 5 $\frac{3}{4}$ |
| 8 22 38 | 59 41 $\frac{1}{2}$ | 22 36 $\frac{1}{2}$ | 37 5 |
| 8 26 15 | 58 58 $\frac{1}{8}$ | 21 42 $\frac{3}{4}$ | 37 5 $\frac{1}{2}$ |

Retine differentiam Asc. 37 5 $\frac{1}{2}$

DIE 11 NOUEMBRIS A. M.

| | | | |
|--------------------------------|-------------------------|--------------------|--------------------|
| | Distabat ♄ ab Aldeb. | Declinatio eius | Alt. tunc quasi |
| 4 ^H 39 ^M | 36 52 $\frac{3}{4}$ | 8 9 $\frac{1}{2}$ | 1 0 |
| 4 42 | 36 50 | 8 9 $\frac{3}{4}$ | 0 30 |
| 4 46 | 36 47 | 8 10 | 0 15 |

Hæc varietas in obseruatione ♄ non accidit vitio obseruationis, sed propter refractionem quæ obueniebat in tam decliui situ. Poterit itaque hinc indagari refractionis ratio.

Horologium in Meridie celerius ibat M. 1 55". Qui error saltem ab hora matutina 3 $\frac{5}{8}$.

EODEM DIE P. M.

| | | |
|----------------------------|----|------------------|
| H. 5 M. 25 P. M. Declin. ♄ | 7 | 53 |
| Alt. pinnac. | 7 | 52 $\frac{1}{2}$ |
| Fuit tunc Alt. ♄ | 19 | 5 |

| | | | | |
|------|----------------------|--------------|--------------|-----------|
| | Lucid. Vult. occ. | ♄ orient. | Dist. æq. | Alt. ♄ |
| 5 29 | 26 14 | 66 54 | 93 8 | 19 26 |
| 5 31 | 26 47 | 66 22 | 93 9 | 19 30 |

Pone itaque distantiam æquatoriam ♄ & Lucidæ Vulturis 93 8 $\frac{1}{2}$.

5 37 Declin. ♄ vtroque pinnac. 7 52 $\frac{1}{2}$
Alt. ♄ tunc fuit 20 12

7 53 Decl. ♄ Bor. 7 52

| | | | |
|---------|---------------------|---------------------|--------------------|
| | Oculus ☿ | ♄ | Dist. |
| | or. | or. | æquat. |
| 7 58 55 | 66 8 $\frac{1}{2}$ | 29 0 | 37 8 $\frac{1}{2}$ |
| 8 0 30 | 65 43 $\frac{1}{4}$ | 28 35 | 37 8 $\frac{1}{2}$ |
| 8 2 0 | 65 21 | 28 11 $\frac{1}{2}$ | 37 9 $\frac{1}{2}$ |
| 8 3 30 | 64 56 $\frac{1}{2}$ | 27 48 $\frac{1}{4}$ | 37 8 $\frac{1}{2}$ |
| 8 5 49 | 64 23 | 27 15 | 37 8 |
| 8 8 25 | 63 44 | 26 35 $\frac{1}{2}$ | 37 8 $\frac{1}{2}$ |

Pone distantiam æquatoriam ♄ ab oculo ☿ 37 8 $\frac{1}{2}$

DIE 16 NOUEMBRIS.

| | |
|--|-------|
| 7 ^H 23' 55" Lucida Vult. occid. | 63 13 |
| 7 25 5 | 63 32 |

Ex hac distantia Vulturis a Meridiano horologium ad horam 7 $\frac{1}{2}$ est verificatum, quod 11 $\frac{1}{8}$ scrupulis primis iusto tardius circumuoluebatur. Ante biduum non fuit exacte correctum.

9^H33' 3" Alt. Meridiana ♄ } 41 52 $\frac{1}{2}$
per Q. Volubilem }

9 34 57 Alt. luc. ♄ in Merid. 55 34 $\frac{1}{2}$

Hinc poteris percipere an horologium sit recte constitutum.

9 48 Decl. ♄ per Armillas 7 46 $\frac{1}{2}$

Altero pinnacidio 7 46 $\frac{1}{2}$

10 29 36 Posito loco oculi ☿ in 4° 2' II, obseruabatur locus ♄ in 26 36 $\frac{1}{2}$ ♄

10 33 34 Posito loco Aldeb. vt prius fuit ♄ in 26 36 $\frac{1}{2}$

10 36 59 Posito Aldeb. vt prius fuit ♄ in 26 36 $\frac{1}{2}$

| | | | |
|----------------------------|---------------------|---------------------|---------------------|
| | ♄ | Oculus ☿ | Dist. |
| | occid. | or. | æquat. |
| 10 55 40 | 20 50 $\frac{3}{4}$ | 16 34 $\frac{1}{2}$ | 37 25 $\frac{1}{4}$ |
| 10 57 9 | 21 14 | 16 10 | 37 24 |
| 10 59 4 | 21 43 | 15 41 $\frac{1}{4}$ | 37 24 $\frac{1}{2}$ |
| 11 0 55 | 22 10 | 15 13 $\frac{1}{2}$ | 37 23 $\frac{1}{2}$ |
| 11 2 26 | 22 33 $\frac{1}{4}$ | 14 51 | 37 24 $\frac{1}{4}$ |
| Pone distantiam æquatoriam | | | 37 24 $\frac{1}{2}$ |
| 11 5 0 Repetita declin. ♄ | | | 7 47 |

DIE 17 NOUEMBRIS.

Per Armillas Zodiacales.

8^H 29' 26" P. M. posito loco lucidæ Vult.
in 26° 0' ꝛ obseruabatur locus ꝑ in
26 36³/₄ V
8 31 29 Rurfus posito loco Vult. vt
prius obseruabatur locus ꝑ in
26 37 V

DIE 2 DECEMBRIS P. M.

Pro emendatione loci ꝑⁿⁱ obseruabatur a lucida Vulturis.

| | |
|-----------------------------|---|
| Horol. | } Luc. Vult. occ. 34 14 ³ / ₄ |
| Mai. 4 ^H 40' 19" | |
| Min. 4 23 17 | } ꝑ or. 58 2 ³ / ₄ |
| | |
| | Dist. æquat. 92 17 ¹ / ₂ |
| | Az. ꝑ 63 33, Alt. ꝑ 23 47 ¹ / ₄ |
| Mai. 4 43 11 | } Vult. occ. 34 56 |
| Min. 4 25 55 | |
| | } ꝑ or. 57 20 ¹ / ₂ |
| | |
| | Dist. æquat. 92 16 ¹ / ₂ |
| | Az. ꝑ 65 50, Alt. ꝑ 24 22 ¹ / ₂ |
| Mai. 4 45 56 | } Vult. occ. 35 34 ¹ / ₂ |
| Min. 4 28 25 | |
| | } ꝑ or. 56 40 ¹ / ₂ |
| | |
| | Dist. æquat. 92 15 |
| | Azim. ꝑ 65 31. |

Ponatur distantia æquatoria ꝑ a Vult.

92 16
Ascens. R. lucidæ Vult. 292 41
Prouenit Ascens. R. ꝑ 24 57

DIE 6 DECEMBRIS.

H. 8 15' 15" ꝑ per Meridianum

Alt. 41 40¹/₂
8 20 8 Luc. V in Merid.,
Alt. 55 34¹/₄

Hinc poterit tempus verificari.

ꝑ per Armillas æquat. declin. 7 32³/₄
Alt. pinnacid. 7 33

DIE 16 DECEMBRIS.

Pro verificando loco ꝑⁿⁱ ob obseruationes ipsius ad ꝑ habitas accipiebatur ipsius distantia æquatoria ab oculo ꝛ in hunc modum.

| | | | |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| | Aldebor. or. | ꝑ or. | Dist. æquat. |
| 5 ^H 22 ¹ / ₂ ' | 65 25 ¹ / ₂ | 27 5 ¹ / ₂ | 38 20 |
| 5 28 | 64 7 ¹ / ₂ | 27 46 ¹ / ₂ | 38 20 ³ / ₄ |
| 5 30 ³ / ₄ | 63 33 ¹ / ₂ | 25 13 ¹ / ₂ | 38 19 ³ / ₄ |

Pone iuxta Horam 5¹/₂ dist. ꝑ & Aldeb.
38 20

5 36 Decl. ꝑ vno pinn. 7 34¹/₂
altero pinn. 7 34³/₄

| | | | |
|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| | Aldebor. or. | ꝑ or. | Dist. æquat. |
| 5 42 ⁵ / ₈ | 60 22 | 22 2 ¹ / ₂ | 38 19 ¹ / ₂ |
| 5 45 ¹ / ₄ | 59 45 ¹ / ₂ | 21 27 ¹ / ₂ | 38 18 |
| 5 46 35 | 59 20 ³ / ₄ | 21 0 ³ / ₄ | 38 20 ³ / ₄ |
| 5 49 | 58 49 ¹ / ₂ | 20 31 ¹ / ₂ | 38 18 |

Si itaque posueris ꝑⁿⁱ ab oculo ꝛ
differentiam ascensionalem iuxta
hoc tempus 38 19, non aberrabis
sensibiliter, vel potius 38 19¹/₂, sed
vide sequentia.

| | |
|-----------------------------|-----------------------------------|
| 7 9 40 Altit. Merid. ꝑ | |
| per Volub. | 41 40 |
| per Mural. | 41 39 ¹ / ₂ |
| 7 15 14 Lucid. V per Volub. | 55 34 ³ / ₄ |
| per Mural. | 55 34 ¹ / ₄ |

Fuit itaque tempus inter transitum
ꝑ & caput V 5^m 34^s vel 1° 23¹/₂', quare
cum Asc. R. Lucidæ V sit 26 3, erit
Asc. R. ꝑ 24 39¹/₂, quod potes conferre
cum antecedentibus.

| | |
|--------------------------|----------------------------------|
| Declin. ꝑ vno pinnacidio | 7 34 ³ / ₄ |
| altero | 7 34 ³ / ₈ |

DIE 26 DECEMBRIS.

Pro loco ꝑⁱ inter Aldeb. & ꝑ per
Sextantem 38 19
Decl. ꝑ 8 21¹/₂

| | | | | |
|--|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|
| | Aldeb. or. | ꝑ or. | Dist. æquat. | Alt. ꝑ |
| 5 ^H 0 ^M 5 ^S | 61 17 | 23 1 | 38 16 | 38 ³ / ₄ |
| 5 2 36 | 60 41 ³ / ₄ | 22 25 | 38 16 ³ / ₄ | 38 55 |
| 5 4 22 | 60 13 | 21 55 ³ / ₄ | 38 17 ¹ / ₄ | 39 |
| 5 6 37 | 59 40 | 21 22 ¹ / ₂ | 38 17 ¹ / ₂ | |
| 5 8 35 | 59 12 | 20 52 ³ / ₄ | 38 19 ¹ / ₄ | 39 ¹ / ₄ |

Pone itaque iuxta horam 5 pomeri-
dianam dist. æquat. ꝑ & Lucidæ V
38 17¹/₂ & declinationem ꝑ 8 21¹/₄ bis
repetitam.

Pro exactiori autem ꝑ obserua-
tione obseruabatur per Sextantem
eius distantia ab Aldebora in hunc
modum, idque per Sextantem vete-
rem, velut & præcedentes per eun-
dem.

5^H 35' Inter ꝑ & oculum ꝛ per Sext.
trigonicum veterem 38 19
5 40 Eadem repetita 38 18

¹ Hæc obseruatio facta est inter 4^h 22^m et 4^h 27^m. Distantias ꝑ a ꝑ inter obseruationes Veneris inuenies.

| | |
|--------------------|---------------------|
| 5 ^H 43' | 38 18 |
| 5 46 | 38 17 |
| 5 51 | 38 18 |
| 5 55 | 38 18 |
| 5 57 | 38 17 $\frac{1}{2}$ |

Pone itaque circa hæc tempora, videlicet iuxta horam 5 $\frac{1}{2}$ distantiam \bar{h} ab Aldeb. 38 18

Postea obseruabatur \bar{h} vice versa a prima colli pegasi, quæ est in quadrato magno ipsius, in hunc modum. 6 25 Inter \bar{h} & primam alæ 43 16 $\frac{1}{2}$

bona

Eadem repetita 43 16

sed prior melior 43 14 $\frac{1}{2}$

6 30 55'' transiit \bar{h} Merid.,

Alt. per Volub. 41 44

6 36 8 transiit lucida ∇

Merid., Alt. 55 34 $\frac{1}{2}$

Circa horam 6 50' inter \bar{h}

& primam alæ Pegasi 43 16

Inter \bar{h} et oculum γ 38 18 bis

Hinc ex hac distantia \bar{h} per Sext. veterem potest verificari ipsius locus, adhibita declinatione tam pro huius Vesperis quam præcedentium dierum obseruationibus¹.

DIE 27 DECEMBRIS.

H. 6 24' 0'' \bar{h} in Meridiano, habens altit. 41 45 $\frac{1}{2}$

DIE 31 DECEMBRIS.

6^H24' 4'' Transiit \bar{h} Meridianum habens Altitudinem 41 47 $\frac{1}{2}$

Saturnus itaque inter sequentem in cornu ∇ et lucidam vel inter secundam & 3^{am} transiit per meridianum², potest itaque ipsius Ascensio Recta rimari ex transitu per Horologium inter vtramque obseruationem.

\bar{h} autem habuit Decl. vno 7 41 $\frac{1}{4}$

altero pinn. 7 41 $\frac{1}{2}$

7 0 Inter \bar{h} & Aldeb. per Sext. 38 11 $\frac{1}{4}$ bis

7 15 Inter \bar{h} & extremam alæ Pegasi per Sext. 26 54 $\frac{1}{2}$
26 $\frac{3}{4}$ 54 $\frac{1}{4}$
26 $\frac{3}{4}$ 55

| | \bar{h} occ. | Aldeb. or. | Dist. æquat. |
|---------|---------------------|---------------------|---------------------|
| 7 7 50 | 10 46 $\frac{3}{4}$ | 27 25 | 38 11 $\frac{1}{4}$ |
| 7 10 10 | 11 22 $\frac{1}{4}$ | 26 48 | 38 10 $\frac{1}{4}$ |
| 7 12 0 | 11 49 $\frac{1}{2}$ | 26 20 $\frac{1}{2}$ | 38 10 |
| 7 13 50 | 12 17 $\frac{1}{2}$ | 25 53 | 38 10 $\frac{1}{2}$ |
| 7 15 40 | 12 45 | 25 25 | 38 10 |
| 7 17 45 | 13 14 $\frac{3}{4}$ | 24 55 | 38 9 $\frac{1}{4}$ |
| 7 20 8 | 13 50 | 24 20 | 38 10 |

Pone itaque differentiam ascensionalem \bar{h} & Aldeb. 38 10 & insensibiliter errabis.

Declinatio \bar{h} e superioribus peti potest.

LOCA SATURNI⁴.

| Die | Long. | | Lat. |
|-------------|----------|----------|----------------|
| 10 Octobris | 29 13 | ∇ | 2° 45' 50'' M. |
| 11 — | 29 9 | ∇ | 2 46 40 M. |
| 13 — | 28 59 50 | ∇ | 2 45 50 M. |
| 26 Decemb. | 25 43 20 | ∇ | 2 30 30 A. |

Ex his apparentibus locis \bar{h} collatis invenitur fuisse in ϕ cum simplici \odot ^{1is} Mensis Octobris Die 10 H. 16 $\frac{3}{4}$ in 29° 12' 0'' ∇ .

Calculus { Copern. 29° 12 $\frac{1}{2}$ ' ∇
Alphon. 1° 37 $\frac{1}{2}$ ' γ

Exactiorem \bar{h} locum habebis limitatis die ϕ ijs quæ ex distantijs per Sextantem vtrinque accepta sunt ab Aldebora et I alæ Pegasi.

Colligo \bar{h} in ϕ \odot fuisse in 29 13 ∇ si medium accipiatur inter vtramque obseruationem ab oculo γ & extrema alæ Pegasi.

N. B. Limitatio. Quia dist. ab Ald. dedit 29 13 & altera a prima alæ dedit 29 15 $\frac{1}{2}$, accipimus verum 29 14, quod est quasi intermedium sed propius ad Aldeboram certiore vergens, hinc auferunt horæ 5 vsque ad ϕ M. 1 vt fuerit verus locus ϕ 29 13 ∇ sed ratio sui ductus ob lat. aufert $\frac{2}{3}$, vt sit 29° 12' 20'' ∇ .

¹ Adscriptum est in codice V: »Prouenit Long. 25° 43' ∇ Latitudo 2° 30' 15'' Merid.«.

² Vide infra inter obseruationes stellarum in Ariete.

³ Codex habet 24°, sed prave.

⁴ E codice V.

*Pro loco h Die 26 Decembris
circa ultimam stationem.*

| | |
|-----------------------------|----------|
| <i>H.5 M.45 Distantia h</i> | |
| <i>ab Ald.</i> | 38 18 |
| <i>Declinatio h</i> | 7 38½ |
| <i>Declinatio Aldeboræ</i> | 15 36½ |
| <i>Angulus differentiae</i> | |
| <i>ascenf. supp.</i> | 38 18 45 |
| <i>Ascensio recta Ald.</i> | 63 4 30 |
| <i>Ergo Asc. recta h</i> | 24 45 45 |
| <i>H.6 M.25 Distantia h</i> | |
| <i>a prima alæ Pegasi</i> | 43 16 30 |

Declinatio I

| | |
|---------------------------------------|------------|
| <i>alæ Pegasi</i> | 13 1½ |
| <i>Ascensio recta hujus</i> | 341 3 15 |
| <i>Angulus d^{iae} Ascen.</i> | 43 41 30 |
| <i>Ergo hinc Asc. recta h</i> | 24 44 45 |
| <i>H.6 M.0 Ascensio recta</i> | |
| <i>h limitata</i> | 24 45½ |
| <i>Declinat. B.</i> | 7 38½ |
| <i>Resp. Longitudo</i> | 25 43 20 V |
| <i>Latitudo</i> | 2 30 30 A. |
| <i>Arcus inclinat. subt.</i> | 20 |
| <i>Vera longitudo</i> | 25 43 0 V |

OBSERVATIONES IOUIS.

DIE 13 JANUARIJ.

| | |
|---|----------|
| <i>Alt. 4 Meridiana per Quadr.</i> | 53 56 |
| <i>Decl. 4 per Armillas cum eBet in Merid., vtroque pinnac.</i> | 19 53 B. |
| <i>Per Sext. Δ.</i> | |
| <i>6^H 0^M Dist. inter 4 & lucid. V</i> | 31 10 |
| <i>6 5 Eadem repetita</i> | 31 10½ |
| <i>6 18½ Inter 4 & oculum ∞</i> | 5 34 |
| <i>6 44 Eadem</i> | 5 33 |
| <i>6 54 Eadem, bona</i> | 5 34½ |
| <i>6 30 Declin. 4 vtroque</i> | |
| <i>pinnac.</i> | 19 53 |
| <i>per Armillas subterraneas.</i> | |

DIE 14 JANUARIJ.

| | |
|------------------------------------|--------|
| <i>Alt. 4 in Merid.</i> | 53 57 |
| <i>Declin. per Armillas</i> | 19 52½ |
| <i>Altero pinnacid.</i> | 19 52 |
| <i>Differentia est scrupulorum</i> | 40''. |

DIE 15 JANUARIJ.

| | |
|------------------------------------|----------|
| <i>Alt. Merid. 4 per Q. Volub.</i> | 53 57 35 |
| <i>Declin. eiusdem vno</i> | |
| <i>pinnac.</i> | 19 52½ |
| <i>Alt. pinnacid.</i> | 19 52 0 |
| <i>Per Q. Tichon.</i> | 53 57½ |

DIE 16 JANUARIJ.

| | |
|-------------------------------------|----------|
| <i>Alt. Meridiana per Q. Volub.</i> | 53 58 |
| <i>Declin. per pinnacidia</i> | I 19 52½ |

¹ Sine dubio debet eBe: »Alt. Aldeboræ«.

Arm. magnar.

II 19 52½

fatis bene conuenit.

| | |
|------------------------------|-------|
| <i>Alt. 4 per Q. Tichon.</i> | 53 58 |
|------------------------------|-------|

DIE 21 JANUARIJ.

| | | | |
|-----------------------------------|----------|---|--------------------|
| H. $7\frac{1}{8}$ Declin. 4 | | per Armill. subt. 19 $54\frac{1}{2}$ B. | |
| Alt. 4 Mer. Q. Tich. ¹ | | 49 | 42 |
| Alt. pinnac. | | 49 | $42\frac{1}{8}$ |
| Obferuatio 4 per Armillas. | | | |
| | 4 occid. | Cor Ω or. | Dist. æq. |
| 9 41 | 39 50 | 47 $17\frac{3}{4}$ | 87 $7\frac{3}{4}$ |
| 9 $43\frac{1}{2}$ | 40 23 | 46 $44\frac{1}{2}$ | 87 $7\frac{1}{2}$ |
| 9 $45\frac{1}{2}$ | 40 57 | 46 $10\frac{1}{4}$ | 87 $7\frac{1}{4}$ |
| 9 48 Declin. 4 Bor. | | | 19 $54\frac{3}{4}$ |

Cum vero eBet 4 in meridiano,

| | |
|-------------------------|---------|
| <i>Alt. per Muralem</i> | 54 0 |
| | 34 5 30 |

Decl. 19 54 30

*Inquiratur hinc locus 4 ponendo
ad horam 9½ ipsius differentiam Asc.
a corde ∞ 87 7½ & declinationem bo-
ream 19 54½, vt constet locus 4 non
longe a statione existentis. Sed cordis
∞ Asc. Recta verificetur ex Ascen-
sione recta oculi ∞ hoc anno 63 5 vt
conueniat ratione distantiae.*

DIE 22 JANUARIJ.

| | |
|-------------------------------------|-------|
| <i>Alt. Merid. 4 per Q. Tichon.</i> | 54 0½ |
| <i>altero pinnac.</i> | 54 0½ |

| | γ occident. | Cor Ω orient. | Diff. æquat. |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 10 ^H 52 ^M | 59 5 | 28 2 | 87 7 |
| 10 55 ¹ / ₂ | 59 44 ¹ / ₂ | 27 23 ¹ / ₂ | 87 8 |
| 10 58 | 60 27 | 26 43 ¹ / ₂ | 87 10 ¹ / ₂ |
| 11 1 | 61 3 ³ / ₄ | 25 5 ¹ / ₄ | 87 9 |
| 11 3 ¹ / ₂ | 61 47 ¹ / ₄ | 25 21 ¹ / ₂ | 87 8 ³ / ₄ |

Splendor ζ hanc varietatem peperit.
11 7¹/₂ Declin. γ per Armillas 19 55¹/₂

DIE 23 JANUARIJ.

| | γ occ. | Cor Ω or. | Diff. æquat. |
|---|-----------------------------------|-----------------------------------|-----------------------------------|
| 10 ^H 2' | 47 47 ¹ / ₂ | 39 19 ¹ / ₂ | 87 6 ⁵ / ₈ |
| 10 5 ⁵ / ₈ | 48 41 ² / ₃ | 38 24 ² / ₃ | 87 6 ¹ / ₈ |
| 10 8 ¹ / ₂ | 49 20 ¹ / ₂ | 37 46 ² / ₃ | 87 7 ¹ / ₈ |
| 10 10 ⁵ / ₈ | 49 54 ³ / ₄ | 37 12 ¹ / ₂ | 87 7 ¹ / ₄ |
| 10 16 ¹ / ₂ Decl. γ B. vno pinn. | | | 19 55 |
| altero pinn. | | | 19 54 ¹ / ₂ |

DIE 1 FEBRUARIJ.

H. 6 M. 30 Declin. γ
per Armillas 20 1¹/₂
alt. pinnacid. 20 1¹/₈
cum non longe abest a Meridiano.
Alt. eius Meridiana 54 7²/₃
per Q. Tichon., vtroque pinnacidio.

DIE 5 FEBRUARIJ.

Alt. merid. γ per Q. Tich. 54 11
vtroque pinnacidio

DIE 7 FEBRUARIJ.

H. 6 M. 10 γ in Merid. altitudinem habuit per Q. Tichon. 54 13
vtroque pinnacidio

Declin. per Armillas 20 7¹/₄
Alt. pinnacid. 20 7²/₈

DIE 23 SEPTEMBRIS A. M.

P. M. N.
4^H50' Decl. γ Bor. vno pin. 22 43
Alt. pinnacid. 22 43
4 58 Inter γ & Aldebor. I 40 9¹/₈
per Sext. Δ II 40 9¹/₈
5 3 Inter γ & cor Ω I 40 12³/₄
per Sext. Δ II 40 12³/₄
Pro loco γ .

H. 5 Diff. Asc. R. γ & oculi γ ex distantia per Sext. 41° 59'

| | |
|------------------------|---|
| Asc. R. oculi γ | 63 6 |
| Asc. R. γ | 105 5 |
| Decl. B. | 22 43 |
| Resp. Longitudo | 13 53 ¹ / ₂ \odot |
| Latitudo | 0 4 ¹ / ₂ M. |

Collatio inuenti loci cum calculo Alphonsino & Coperniano.

| Ex obseruatione | Calc. Alph. | Calc. Cop. |
|---|---------------|---------------|
| Long. 13 53 ¹ / ₂ \odot | 13 38 \odot | 13 21 \odot |
| Lat. 0 4 ¹ / ₂ M. | 0 19 M. | 0 38 M. |

DIE 24 SEPTEMBRIS A. M.

| P. M. N. | γ orient. | Oculus γ orient. | Diff. æquat. |
|--|-----------------------------------|----------------------------------|-----------------------------------|
| 3 ^H 13' | 47 43 ¹ / ₄ | 5 40 ¹ / ₂ | 42 2 ² / ₄ |
| 3 18 | 46 19 ¹ / ₂ | 4 17 | 42 2 ¹ / ₈ |
| 3 20 | 45 48 ¹ / ₂ | 3 46 | 42 2 ¹ / ₂ |
| 3 24 ¹ / ₂ Declin. γ B. | | | 22 43 ¹ / ₄ |

DIE 10 OCTOBRIS.

12^H36' Fuit distantia γ 41 22
12 38¹/₂ & oculi γ 41 22¹/₄
12 42 Declin. γ obseruabatur per Armillas subterraneas 22 36¹/₂ B.
12 44 Eadem declin. repet. 22 36¹/₂

| | Oculus γ orient. | γ orient. | Diff. æquat. |
|----------------------------------|----------------------------|-----------------------------------|-----------------------------------|
| 1 2 | 22 43 | 66 1 ¹ / ₂ | 43 18 ¹ / ₂ |
| | | Alt. γ 32° | |
| 1 4 ⁵ / ₈ | 22 1 | 65 18 ³ / ₄ | 43 17 ³ / ₄ |
| 1 8 ¹ / ₈ | 21 9 | 64 25 ¹ / ₄ | 43 16 ¹ / ₄ |
| 1 10 ³ / ₄ | 20 30 | 63 48 ¹ / ₈ | 43 18 ¹ / ₈ |

Constituatur itaque iuxta hæc tempora Diff. Asc. γ & Aldeboræ 43 18, & conferatur cum distantia ab eadem stella accepta.

Per Armillas Zodiaci prima obseruatio.

H. 1 M. 40 posito loco oculi γ in 4° 2' Π videbatur locus γ in 14 58 \odot .

Sed postea hora 1 M. 50 bis reiterando & exactius obseruando inueni eadem ratione locum longitudinis γ in 15° 2' \odot . Ergo per Armillas æquatorias prouenit Longitudo 15° 6' \odot , differentia 4 minutorum.

DIE 22 OCTOBRIS A. M.

Obſeruatio Iouis.

H. 5 $\frac{5}{8}$ Declin. $\frac{1}{4}$ B. per Armillas 22 35 $\frac{1}{2}$
 H. 5 56' Diſtancia inter $\frac{1}{4}$ I 38 44 $\frac{1}{2}$
 & cor \odot per Sext. \triangle II 38 44 $\frac{1}{2}$

DIE 24 OCTOBRIS.

H. 7 M. 2 Fuit Declin. $\frac{1}{4}$ Bor. 22 36
 7 3 $\frac{1}{2}$ Repet. Decl. $\frac{1}{4}$ alt. pin. 22 36

DIE 25 OCTOBRIS A. M.

H. 4 M. 35 per horologium verifica-
 tum habuit $\frac{1}{4}$ Alt. Merid. per Q. Volub.
 56 41 $\frac{1}{2}$, hinc declinatio 22 36
 4^H 59' Inter $\frac{1}{4}$ & Aldeb. per Sext. vet.

41 36 $\frac{3}{4}$
 5 0 Declin. $\frac{1}{4}$ per Armillas 22 36
 quod ſatis bene conuenit cum altitu-
 dine Merid.

H. 5 1' Reiterata diſtancia $\frac{1}{4}$ & Aldeb.
 41 36 $\frac{3}{4}$

Potes itaque absque omni errore
 vti diſtancia 41 37, addendo $\frac{1}{4}$ propter
 refractionem, ſi quam habuit Alde-
 boram, obſeruabatur altero pinnaci-
 dio ipſius $\frac{1}{4}$ declinatio per Armillas
 maiores 22 35 $\frac{5}{8}$ fere vt prius.

H. 5 M. 4 Inter $\frac{1}{4}$ & Regulum 38 45 $\frac{1}{2}$
 5 6 $\frac{1}{2}$ Inter $\frac{1}{4}$ & cor \odot 38 45 $\frac{1}{2}$
 5 9 Eadem diſt. repet. 38 45 $\frac{1}{2}$

Bonæ, per Sext. veterem.

Ex his potes indagare locum $\frac{1}{4}$ &
 illum ad diem antecedentem redi-
 gere propter obſeruationes \odot ad il-
 lum habitas, erat autem fere ſtatio-
 narius.

H. 5 $\frac{3}{4}$ Armillis minoribus rectifica-
 tis per cor \odot , poſito eius loco in 24 7
 \odot , videbatur $\frac{1}{4}$ longitudo in 15 17 \odot .

H. 5 M. 50 Denuo obſeruauimus $\frac{1}{4}$
 per Armillas Zodiacales minores,
 verificatis per cor \odot , vt prius in 24 7
 \odot & reperiebatur Longitudo $\frac{1}{4}$ in
 15 17 \odot exacte vt prius.

DIE 29 OCTOBRIS A. M.

H. 5 M. 14 $\frac{1}{2}$ verificabatur horolo-
 gium ad oculum \odot , quod ſaltem 1 $\frac{1}{2}$
 Minuto tardius ibat, iſque defectus

erat vltra bidui quo corrigebatur. De-
 inde obſeruabatur $\frac{1}{4}$ in hunc modum.

5^H 21 $\frac{1}{2}$ Declin. $\frac{1}{4}$ Bor. 22 37 $\frac{1}{2}$
 5 21 $\frac{3}{4}$ Diſtabat ab Aldeb. 41 34 $\frac{1}{2}$
 5 23 Eadem $\frac{1}{4}$ diſtancia 41 34 $\frac{1}{2}$
 5 28 Inter $\frac{1}{4}$ & cor \odot 38 50
 5 30 $\frac{1}{2}$ Eadem repetita 38 50 $\frac{1}{2}$
 5 34 $\frac{1}{2}$ Repetita declin. $\frac{1}{4}$ B. 22 37 $\frac{1}{2}$

DIE 31 OCTOBRIS A. M.

H. 4 $\frac{1}{2}$ Verificabatur Horologium ad
 oculum \odot , M. 3 $\frac{1}{2}$ ſpatio duorum die-
 rum, poſtquam corrigebatur proxime,
 tardius ibat.

N. B. quod diſtancia oculi \odot a me-
 ridiano ſemel tantum accipiebatur.
 Confule igitur ſequentes fixarum ob-
 ſeruationes a Meridie, & de tempore
 non dubitabis.

4^H 37 $\frac{1}{2}$ Declin. $\frac{1}{4}$ Bor. 22 37

| | Aldeb. occid. | $\frac{1}{4}$ occident. | Diſt. æquat. |
|--------------------|---------------------|-------------------------|---------------------|
| 4 42 $\frac{3}{4}$ | 53 39 $\frac{3}{8}$ | 10 11 $\frac{1}{4}$ | 43 28 $\frac{1}{2}$ |
| 4 45 | 54 17 $\frac{5}{8}$ | 10 49 $\frac{3}{4}$ | 43 28 |
| 4 47 $\frac{1}{2}$ | 54 50 | 11 20 | 43 30 |
| 4 55 $\frac{1}{2}$ | 56 56 $\frac{1}{2}$ | 13 28 | 43 28 $\frac{1}{2}$ |
| 4 57 $\frac{1}{2}$ | 57 19 $\frac{1}{2}$ | 13 51 $\frac{1}{4}$ | 43 28 $\frac{1}{4}$ |

Pone iuxta Horam 4 $\frac{3}{4}$ Differentiam
 æquatoriam $\frac{1}{4}$ & Aldeboræ 43 28 $\frac{1}{2}$
 vna cum ipſius declinatione boreali
 22 37, hincque inquiratur ipſius lon-
 gitudo & latitudo.

H. 5 M. 8 Declin. $\frac{1}{4}$ repetita
 vno pinnacidio 22 37 $\frac{1}{2}$
 pinnacid. alt. 22 37 $\frac{1}{8}$

Poſtea $\frac{1}{4}$ a corde \odot obſeruauimus
 hoc modo.

| | $\frac{1}{4}$ occident. | cor \odot orient. | Diſt. æquat. |
|-----------------------------------|-------------------------|---------------------|---------------------|
| 5 32 | 22 29 $\frac{1}{4}$ | 17 30 | 39 59 $\frac{1}{4}$ |
| 5 34 $\frac{1}{2}$ | 23 2 | 16 56 | 39 58 |
| 5 36 | 23 38 | 16 20 $\frac{3}{4}$ | 39 58 $\frac{3}{4}$ |
| Inter $\frac{1}{4}$ & cor \odot | | | 39 59 |
| Inter $\frac{1}{4}$ & Aldeb. | | | 43 28 $\frac{1}{2}$ |
| Diſt. æquat. | | | 83 27 $\frac{1}{2}$ |

Cumque eadem diſtancia per in-
 ſtrumentum obſeruabatur¹, patet &
 inſtrumentum verum & obſeruatio-
 nes has fuiſſe bonas.

¹ Vide infra inter obſeruationes ſtellarum in Leone hoc die factas.

DIE 1 NOUEMBRIS A. M.

H. 4 $\frac{1}{2}$ Horologium verificatum est, quod vnus diej spacio 2 Minutis fere iusto citius ibat. Hæc correctio Horologij mediocris erat.

4^h 48' Declin. 2 B. 22 37 $\frac{1}{2}$

| | Cor Ω or. | η occ. | Diff. Ascens. |
|--------------------|---------------------|-------------|---------------------|
| 4 55 $\frac{1}{2}$ | 25 40 | 14 20 | 40 0 |
| 4 57 | 25 12 $\frac{1}{2}$ | 14 47 | 39 59 $\frac{1}{2}$ |
| 5 0 | 24 33 | 15 24 | 39 57 |

Non satis certæ propter nubeculas quasdam.

H. 5 16 Inter 2 et cor Ω 38 53 per Sext. Trig¹.

DIE 2 NOUEMBRIS A. M.

Paulo ante horam 4 errorem Horologij ad \odot in Meridie antecedente correcti, fere nullum ex distantia oculi γ a Meridiano deprehendimus.

H. 4 M. 0 2 in Merid. habuit Alt. per Q. Volub. 56 43

4 5 Decl. 2
per Armill. max. 22 36 $\frac{3}{4}$
Alt. pinnacidio 22 37

4 24 Inter 2 & ocul. γ I 41 27 $\frac{1}{2}$
per Sext. Trigon. II 41 27 $\frac{1}{2}$

4 31 Inter 2 I 38 54 $\frac{1}{2}$

4 33 & cor Ω II 38 55

4 35 per Sext. Trigon. III 38 55

| | Cor Ω or. | η occ. | Diff. æquat. |
|--------------------|---------------------|---------------------|--------------------|
| 4 54 56 | 25 57 $\frac{1}{8}$ | 14 4 $\frac{1}{2}$ | 40 2 |
| 4 55 $\frac{1}{2}$ | 25 33 | | |
| 4 56 28 | | 14 28 $\frac{1}{2}$ | 40 1 $\frac{1}{2}$ |

Horologium in Meridie saltem $\frac{1}{2}$ Min. tardius ibat. Quod erat insensibile.

DIE 4 NOUEMBRIS A. M.

H. 5 50² Declin. 2 22 38 $\frac{3}{4}$

| | Aldebor. occ. | η occ. | Diff. æquat. |
|--------------------|---------------------|---------------------|---------------------|
| 5 53 $\frac{2}{8}$ | 74 20 | 31 5 $\frac{1}{2}$ | 43 14 $\frac{1}{2}$ |
| 5 55 $\frac{1}{8}$ | 74 40 | 31 20 | 43 20 |
| 6 0 | 75 42 $\frac{1}{2}$ | 32 23 $\frac{1}{4}$ | 43 18 $\frac{3}{4}$ |
| 6 2 $\frac{3}{8}$ | 76 13 | 32 55 | 43 18 |

Pone distantiam æquatoriam 43 19
& non multum aberrabis.

¹ Cf. infra inter obseruationes Mercurii.

² Tempora a Tychone correctæ sunt.

³ Adscripsit Tycho: In correctio Mer. Hinc poterit denuo verificari Horologium.

| | η occ. | Cor Ω or. | Differ. Asc. |
|---------------------------------|-------------|--------------------|--------------------|
| 6 4 12'' | 33 36 | 6 30 $\frac{1}{2}$ | 40 6 $\frac{1}{2}$ |
| 6 5 $\frac{1}{2}$ | 33 58 | 6 9 $\frac{1}{2}$ | 40 7 $\frac{1}{4}$ |
| Pone differentiam æquator. 40 7 | | | |

DIE 7 NOUEMBRIS A. M.

H. 3 26' 10'' Transiit 2 Merid. per Q. Volub. & habuit Altitud. 56 46 $\frac{1}{2}$

H. 5 13' 58'' Cor Ω orient. 11 59
5 15 15 11 40 } adde
5 17 2 11 11 $\frac{1}{2}$ } 15'

Hinc potest verificari Horologium, quod in Meridie antecedente erat correctum, idque iuxta nouum Meridianum.

5 22 Dist. inter 2 & cor Ω 39 6 $\frac{1}{2}$
5 27 Eadem per Sext. Δ , bona 39 6 $\frac{1}{2}$
5 36 $\frac{1}{2}$ Declin. 2 vno pin. 22 39 $\frac{3}{4}$
altero 22 39 $\frac{3}{4}$

Ergo vera declin. 2 22 39 $\frac{3}{4}$

Alt. ipsius meridiana 56 46 $\frac{1}{2}$

Subt. alt. æq. 34 5 $\frac{1}{2}$

hinc declin. 22 41

Pone itaque declin. 2 22 40

Nam fieri potest quod in altitudine Meridiana aliquis lapsus sit communibus.

| | η occ. | Cor Ω or. | Diff. æq. |
|--------------------|---------------------|--------------------|---------------------|
| 5 43 | 35 49 $\frac{1}{2}$ | 4 27 $\frac{1}{2}$ | 40 17 |
| 5 45 $\frac{1}{2}$ | 36 32 $\frac{3}{8}$ | 3 43 $\frac{1}{2}$ | 40 16 $\frac{1}{2}$ |

verum Cor Ω occ.

| | | | | |
|--------------------|---------|---------------------|---------------------|---------------------|
| 6 56 $\frac{1}{2}$ | 7 17 52 | 55 17 $\frac{3}{4}$ | 15 0 | 40 17 |
| 6 59 10 | 7 20 28 | 55 56 $\frac{1}{2}$ | 15 39 $\frac{1}{4}$ | 40 17 $\frac{1}{4}$ |
| 7 1 20 | 7 22 44 | 56 31 $\frac{1}{2}$ | 16 13 | |

Nota. Horologium in hoc meridie a præcedente 30 Minutis tardius iusto mouebatur, eo quod nimium de pondere præcedente die erat ablatum.

DIE 8 NOUEMBRIS A. M.

3^h 19' 25'' } Alt. 2 Merid. 56 46 $\frac{1}{2}$
3 32 48 cor. } Decl. 2 per Armill. 22 40
Alt. pinnacid. 22 40 $\frac{1}{2}$

Postea pro Horologio verificando obseruabantur \mathcal{A} & cor Ω in distantijs æquatorijs.

| Corr. \mathcal{A} | \mathcal{A} occid. | Cor Ω occ. | Dist. æq. |
|---------------------|----------------------|--------------------|---|
| 6 59 40 | 7 17 4 | 56 11 | 15 51 40 20 |
| 7 1 5 | 7 18 25 | 56 33 | 16 11 40 22 |
| 7 3 10 | 7 20 30 | 57 5 $\frac{1}{6}$ | 16 43 $\frac{1}{2}$ 40 21 $\frac{2}{3}$ |

DIE 10 NOUEMBRIS A. M.

| Corr. | \mathcal{A} occid. | Cor Ω occ. | Dist. æq. |
|--------------------|--|--------------------|---------------------|
| 7 14 40 | 7 15 33 | 57 49 30 | 17 20 40 29 30 |
| 7 16 30 | 7 17 20 | 58 10 40 | 17 41 45 40 29 |
| 7 17 30 | 7 18 19 | 58 28 | 17 59 40 29 |
| | | Alt. \mathcal{A} | 36 11 |
| 7 31 $\frac{1}{2}$ | Declin. Bor. | | 22 42 $\frac{1}{2}$ |
| 7 32 | Repetita eadem | | 22 42 $\frac{1}{2}$ |
| 7 34 $\frac{1}{2}$ | Altero pinnacidio | | 22 42 |
| 7 35 30 | Distabat \mathcal{A} a mer. verf. occ. | | 62 56 |
| | | | 15 |
| cor. 35 56 | \mathcal{A} a mer. | | 63 11 |
| 7 37 15 | | | 63 24 |
| | | | 15 |
| cor. 37 48 | \mathcal{A} a mer. | | 63 39 |
| 7 38 0 | | | 63 35 $\frac{1}{2}$ |
| | | | 15 |
| cor. 38 32 | | | 63 50 |

Inuenta Ascensione Recta \mathcal{A} 106° 6' ex distantia æquatoria eius a corde Ω et Asc. R. \odot 234° 29' ad locum suum in Meridie Diej 9 Nouembris data, Tempora antecedentia sunt verificata per obseruatam distantiam \mathcal{A} a Meridiano correcto ad Horam 7 $\frac{1}{4}$ et 7 $\frac{2}{3}$. Ad Horam 7 $\frac{1}{4}$ etiam tempus ad cor Ω examinatum.

DIE 11 NOUEMBRIS A. M.

H. 3 $\frac{5}{6}$ Horologium verificatum est ad oculum γ & cor Ω .

| 4 ^h 3' Declin. \mathcal{A} B. | vno pin. | 22 42 $\frac{2}{3}$ |
|--|---------------------|---|
| | alt. pin. | 22 42 $\frac{1}{4}$ |
| Oculus γ occ. | \mathcal{A} occ. | Dist. æquat. |
| 4 10 25 | 55 38 | 12 42 42 56 |
| 4 12 24 | 56 10 | 13 13 $\frac{1}{4}$ 42 56 $\frac{3}{4}$ |
| 4 13 48 | 56 30 | 13 34 42 56 |
| 4 15 35 | 56 57 $\frac{1}{2}$ | 14 2* 42 55 $\frac{1}{2}$ |

* propter trabem non satis exacta.
Pone distantiam æquat. 42 56 $\frac{1}{4}$

¹ E codice V.

Postea repetebatur \mathcal{A} obseruatio idque a corde Ω , vt vice versa haberi possit, cum ille inter Aldeboram & Regulam intermedius esset.

| Cor. Ω or. | \mathcal{A} occ. | Dist. æquat. |
|-----------------------|---------------------|---|
| 4 51 $\frac{1}{3}$ | 17 32 | 22 56 $\frac{1}{2}$ 40 28 $\frac{1}{2}$ |
| 4 52 $\frac{2}{3}$ | 17 10 $\frac{1}{2}$ | 23 17 40 27 $\frac{1}{2}$ |
| 4 54 $\frac{1}{2}$ | 16 44 $\frac{1}{2}$ | 23 44 $\frac{1}{2}$ 40 29 |
| Pone dist. æquatoriam | | 40 28 |

Deinde obseruabatur \mathcal{A} a meridiano idque pro verificatione horologij.

| | | |
|--------------------|----------------------|---------------------|
| 7 29 $\frac{1}{2}$ | \mathcal{A} occid. | 62 49 |
| 7 30 40 | | 63 6 |
| 7 32 45 | | 63 36 $\frac{1}{2}$ |
| 7 33 42 | | 63 50 $\frac{1}{4}$ |

Atque hinc poterit rectificari error horologij si quis fuerit, inuento primum loco \mathcal{A} ex obseruationibus supra datis. Sunt autem hæ distantie a meridiano veræ & emendatæ, adiectis illis 15 scrupulis quæ desiderabantur.

Horologium in Meridie celerius ibat M. 1 55'', qui error saltem est ab hora matutina H. 3 $\frac{5}{6}$.

DIE 23 NOUEMBRIS A. M.

H. 5 $\frac{1}{6}$ Horologium verificatum est ad stellas.

| 5 ^h 29 ^m Declin. \mathcal{A} B. | | 22 50 |
|---|---------------------|---|
| \mathcal{A} occ. | Cor Ω occ. | Dist. æquat. |
| 5 36 25'' | 48 16 | 6 39 $\frac{1}{2}$ 41 36 $\frac{1}{2}$ } dubia } |
| 5 39 5 | 48 47 | 7 15 41 32 |
| 5 41 50 | 49 28 $\frac{1}{2}$ | 7 57 41 31 $\frac{1}{2}$ |
| 5 47 55 | 51 0 | 9 27 $\frac{1}{2}$ 41 32 $\frac{1}{2}$ |
| 5 49 20 | 51 20 $\frac{1}{4}$ | 9 48 $\frac{1}{2}$ 41 31 $\frac{3}{4}$ |
| Ad horam 5 $\frac{5}{6}$ pone | | 41 32 |
| 5 55 $\frac{1}{3}$ Inter \mathcal{A} & cor Ω | | 40 18 $\frac{1}{2}$ |
| 5 58 $\frac{1}{3}$ per Sext. \triangle | | 40 19 |
| 6 1 Repetita eadem | | 40 17 |

Propter ventum quo Sextans mouebatur exacte obseruare hanc distantiam non licuit.

| | |
|---------------------------------------|---------------------|
| 6 4 Repetita declin. \mathcal{A} B. | 22 50 |
| Alt. pinnac. | 22 49 $\frac{3}{4}$ |

(Sumpta distantia \mathcal{A} a corde Ω 40° 18' prouenit per operationem angulus differ. Ascens. 41° 34' 40'').¹

H. 5 $\frac{1}{2}$ Ex distantia æquatoria φ a corde \odot 41° 32' prouenit Asc. R. 105° 3', Decl. φ B. 22° 50'. Hinc

Longitudo φ 13° 50 $\frac{1}{2}$ \odot
 Latitudo φ 0 2 $\frac{1}{2}$ B.

H. 6 M. 33 obseruauit ipsemet cum Aurifabro meo Ioanne locum φ per Armillas Zodiacales, & inueni quod posito loco cordis \odot in 24 7 \odot iuxta nostram restitutionem locus φ 13 47 $\frac{1}{2}$ \odot .

H. 6 37' Helias & Aurifaber idem obseruarunt inueneruntque φ 13 47 $\frac{1}{2}$ \odot

6 42 Rursus idem obseruarunt inueneruntque φ 13 47 $\frac{1}{2}$ \odot

| | φ occident. | Spica or. | Dist. æquat. |
|-------------------|---------------------|---------------------|---------------------|
| 6 51 15 | 66 45 | 24 9 $\frac{1}{2}$ | 90 54 $\frac{1}{2}$ |
| 6 53 0 | 67 12 | 23 42 $\frac{1}{2}$ | 90 54 $\frac{1}{2}$ |
| 7 3 $\frac{1}{2}$ | 69 47 $\frac{1}{2}$ | 21 7 $\frac{1}{4}$ | 90 55 $\frac{1}{4}$ |
| 7 7 | 70 42 $\frac{1}{2}$ | 20 13 $\frac{1}{2}$ | 90 55 $\frac{2}{3}$ |
| 7 9 | 71 11 $\frac{1}{2}$ | 19 43 $\frac{1}{2}$ | 90 55 |
| 7 11 | 71 36 | 19 17 $\frac{3}{4}$ | 90 54 |

Pone distantiam æquatoriam

Spicæ & φ 90 55

6 55 Declin. φ vtroque pinnac. 22 50

6 58 Decl. Spicæ III° ,
 vtroque pin. 8 57

DIE 24 NOUEMBRIS A. M.

H. 7 $\frac{1}{2}$ Horologium 2 tantum minutis a Meridie proxima correctum iusto tardius moueri ex distantia cordis \odot a Meridiano visum est, sed illud tunc permanere in sua reuolutione permittimus.

| | φ occ. | Cor \odot occ. | Dist. æquat. |
|-------------------------------------|---------------------|---------------------|---------------------|
| 7 ^H 24' 10" | 76 54 $\frac{1}{2}$ | 35 13 | 41 41 $\frac{1}{2}$ |
| 7 25 | 77 12 | 35 30 | 41 42 |
| 7 26 20 | 77 28 $\frac{1}{4}$ | 35 46 $\frac{1}{2}$ | 41 41 $\frac{3}{4}$ |
| 7 27 45 | 77 48 $\frac{1}{2}$ | 36 6 $\frac{1}{2}$ | 41 42 |
| 7 29 0 | 78 5 $\frac{1}{2}$ | 36 24 $\frac{1}{4}$ | 41 41 $\frac{1}{4}$ |
| 7 34 Declin. φ B. vrio pin. | | | 22 51 $\frac{1}{2}$ |
| | | altero pin. | 22 51 $\frac{1}{4}$ |

Per Armillas Zodiacales posito loco cordis \odot in 24 7 \odot obseruabatur Hora 7 M. 43 locus φ in 13 40 $\frac{3}{4}$ \odot .

¹ Cf. supra p. 15 sqq.

DIE 2 DECEMBRIS¹.

A. M. obseruabatur φ pro Ascensione Recta φ .

| | | |
|------------------------|----------------------------------|---------------------|
| 7 ^H 25' 30" | Distantia æqua- | 42 34 $\frac{1}{2}$ |
| 7 30 30 | toria φ & cordis \odot | 42 35 |
| 7 34 10 | | 42 35 $\frac{1}{2}$ |
| 7 36 25 | | 42 35 |
| 7 39 20 | | 42 35 |
| 7 41 25 | | 42 35 |

Ponatur itaque distantia æquatoria φ a corde \odot circa hoc tempus 42 35

Ascensio R. cordis \odot 146 35

Prouenit Asc. R. φ 104 0

Postea pro horologio & tempore verificando obseruabatur φ .

| Tempus | φ a Merid. occ. per Armill. | Azim. φ occ. per Q. Volub. | Alt. φ per Q. Volub. |
|------------------------|-------------------------------------|------------------------------------|------------------------------|
| 7 ^H 59' 35" | 96 5 | 108 20 | 15 37 |
| 8 1 52 | 96 39 | 108 38 | 15 19 $\frac{1}{2}$ |
| 8 4 27 | 97 19 $\frac{1}{2}$ | 109 9 | 14 57 |
| 8 6 42 | 97 53 $\frac{1}{2}$ | 109 35 | 14 40 $\frac{1}{2}$ |
| 8 10 55 | 98 56 $\frac{1}{2}$ | 110 26 | 14 5 |
| 8 12 23 | 99 19 $\frac{1}{2}$ | 110 45 | 13 55 |
| 8 14 32 | 99 47 | 111 9 | 13 36 $\frac{1}{2}$ |

Azinutha numerantur a Meridie versus occasum ad septentrionem.

DIE 15 DECEMBRIS A. M.

5^H 8' Declin. φ B. 23 7 $\frac{1}{2}$, Alt. φ 27 5

| | φ occ. | Cor \odot occ. | Dist. æq. | Alt. φ |
|---------|---------------------|---------------------|---------------------|----------------|
| 5 18 27 | 75 17 | 30 55 | 44 22 | |
| 5 26 10 | 77 16 $\frac{1}{4}$ | 32 55 $\frac{1}{4}$ | 44 20 $\frac{1}{8}$ | 25 30 |
| 5 28 43 | 77 55 | 33 34 $\frac{1}{2}$ | 44 20 $\frac{1}{2}$ | 25 20 |
| 5 55 | 81 47 | | 44 20 $\frac{1}{2}$ | |

Postea ipsemet præsens obseruationi attendebam in hunc modum per vtrumque horologium. Maius horologium nondum erat satis correctum.

| Per min. | Per mai. | φ a mer. verf. occ. | Dist. æquat. a Spica III° | Alt. φ |
|----------|----------|-----------------------------|---|----------------|
| 6 8 40 | 6 8 53 | 88 9 $\frac{1}{2}$ | 93 40 $\frac{3}{4}$ | 20 0 |
| 6 12 8 | 6 12 15 | 89 3 | 93 41 | 19 40 |
| 6 14 35 | 6 14 45 | 89 39 | 93 40 $\frac{3}{4}$ | 19 25 |

A lucida
 ceruicis \odot

| | | | | |
|--------|--------|----------------------|------|----|
| 7 7 30 | 7 7 16 | 103 10 $\frac{3}{4}$ | 47 1 | 12 |
|--------|--------|----------------------|------|----|

quasi

Eadem vespera

| | ☿ orient. | Lucid. | ♂ occ. | Diff. æquat. |
|--------------------|---------------------|---------------------|--------------------|--------------|
| 8 15 20 | 63 56 $\frac{1}{2}$ | 12 6 $\frac{2}{3}$ | 76 3 | |
| 8 23 49 | 61 46 $\frac{1}{2}$ | 14 16 $\frac{1}{4}$ | 76 2 $\frac{3}{4}$ | |
| 8 28 20 | 60 38 | 15 25 | 76 3 | |
| 8 42 55 | 56 56 $\frac{1}{2}$ | 19 7 | 76 3 $\frac{1}{2}$ | |
| 8 48 35 | 55 30 $\frac{1}{2}$ | 20 33 $\frac{1}{3}$ | 76 3 $\frac{1}{2}$ | |
| Declin. ☿ Bor. | | | | |
| | vno pin. | alt. pin. | | |
| 8 31 58 | 23 7 $\frac{1}{2}$ | 23 7 $\frac{1}{2}$ | | |
| 8 57 $\frac{1}{3}$ | 23 7 $\frac{1}{2}$ | 23 7 $\frac{2}{3}$ | | |
| 9 29 $\frac{1}{2}$ | 23 7 $\frac{1}{2}$ | 23 7 $\frac{1}{2}$ | | |
| 9 36 | 23 7 $\frac{1}{2}$ | 23 7 $\frac{2}{3}$ | | |

DIE 16 DECEMBRIS MANE.

| | |
|--|-----------------------|
| 5 ^H 41 $\frac{1}{3}$ ' Declin. ☿ per Arm. | 23 7 $\frac{1}{4}$ B. |
| Alt. pinnac. | 23 7 $\frac{1}{2}$ |
| 6 17 48 Diff. Spicæ | 5 49 $\frac{1}{2}$ |
| 6 20 59 a merid. | 5 3 |

pro horologio verificando.

Diff. Spicæ est orientalis.

DIE 22 DECEMBRIS
Obseruatio ☿ iuxta ☉.

| | ☿ or. | Oculus ♂ occ. | Differ. Afc. |
|----------------------------|---------------------|---------------------|---------------------|
| 9 ^H 55' 22" | 35 10 $\frac{1}{2}$ | 2 48 | 37 58 $\frac{1}{2}$ |
| 9 58 3 | 34 30 $\frac{3}{4}$ | 3 28 $\frac{1}{4}$ | 37 59 |
| 9 59 46 | 34 4 | 3 53 $\frac{1}{2}$ | 37 57 $\frac{3}{4}$ |
| 10 2 27 | 33 23 | 4 34 $\frac{1}{2}$ | 37 57 $\frac{1}{2}$ |
| 10 5 28 Declin. ☿ vno pin. | | 23 14 $\frac{1}{2}$ | |
| altero | | 23 14 | |
| 10 9 54 Repet. decl. ☿ vno | | 23 14 | |
| alt. | | 23 13 $\frac{3}{4}$ | |

Nota. Hæc obseruatio ☿ fiebat in ☉ quidem ☉^{lis}, sed inter nubes raptim accipiebatur, quia hisce diebus nulla constans serenitas concedebatur, sunt tamen mediocriter bonæ obseruationes, & potes vti distantia æquatoria ☿ ab oculo ☿ circa horam 10 completam a meridie p. 37 M. 58 & declinatione 23 14 borea absque omni sensibili errore, erat autem ☉ in perigeo eccentrici.

DIE 26 DECEMBRIS.

Obseruabatur ☿ in hunc qui sequitur modum. Erat autem Iouis stella

¹ Quæ sequuntur in margine adscripta sunt.

non longe a ☉ ☿, idque ☉ in Perigæo versante, & hoc vesperi exactius multo obseruabatur quam præcedentibus vespertinis temporibus, eo quod nunc esset apprime serenum, nullis impredientibus nubibus nec ventis nimium flantibus; quare sequentibus obseruationibus potius fidendum, quæ tamen cum prioribus ante ☿ cum Sole, vel ipso die ☿ factis conferri poterint, vt vera ☿ in medio loco ☉ exquisitius constare possit.

Poteris¹ autem conferre distantias sequentes vice versa sumptas non solum inter se, sed etiam cum distantijs æquatorijs & adhibere declinationem pro loco ☿ exacte verificando iuxta Solis ☿ vt dixi. Tempora sunt verificanda ex transitu stellarum fixarum.

☿ & Aldeboram. Alt.

7^H11' Inter ☿ & Aldeb.

| | | |
|-----------------------------------|---------------------|------------------|
| per Sext. | 36 0 $\frac{1}{2}$ | 32 40 |
| 7 13 $\frac{1}{2}$ Repetita | 36 0 $\frac{1}{2}$ | 32 50 |
| 7 15 $\frac{1}{3}$ per | 36 0 $\frac{2}{3}$ | 33 0 |
| 7 17 Sext. | 36 0 $\frac{1}{2}$ | 33 5 |
| ☿ et inferius caput II viceversa. | | |
| 7 22 Inter ☿ et | 10 10 $\frac{1}{4}$ | 34 |
| 7 26 infer. caput II | 10 10 $\frac{1}{2}$ | 34 $\frac{1}{2}$ |
| 7 28 $\frac{1}{2}$ per Sext. | 10 10 $\frac{1}{2}$ | 35 0 |
| 7 47 Eadem alijs | | |
| pinnac. repetita | 10 11 $\frac{1}{4}$ | 38 0 |
| 7 51 Eadem mutatis | | |
| pinnacid. | 10 11 $\frac{1}{2}$ | 38 20 |

Potes itaque ponere hic dist.

per Sext. 10 11 $\frac{1}{2}$, nam

posteriora pinnacidia respondent prioribus obseruationibus.

Postea maioris verificationis gratia obseruabatur idem ☿ per Armillas æquatorias in hunc modum, & primum capiebatur declin. ☿.

| | |
|--------------------------------------|---------------------|
| 7 55 $\frac{1}{2}$ Decl. ☿ vno pinn. | 23 16 |
| 7 57 altero | 23 16 $\frac{1}{3}$ |

Erat autem tunc altit. ☿ 39 0

Postea obseruabatur distantia æquatoria ☿ & Aldeboræ in hunc modum, atque hinc etiam e distantia Alde-

boræ a meridiano poterit verificari tempus horologij & applicari cæteris.

| | ¶ or. | Aldeb. or. | Diff. æquat. | Alt. ¶ |
|----------------------|--------|------------|--------------|--------|
| 8 ^H 3' 0" | 52 40½ | 15 15 | 37 25½ | 39½ |
| 8 4 52 | 52 12½ | 14 47¼ | 37 25¼ | 40 |
| 8 6 20 | 51 50 | 14 25 | 37 25 | 40½ |
| 8 9 7 | 51 9½ | 13 43 | 37 26½ | |
| 8 15 15 | 49 32½ | 12 8 | 37 24½ | 41½ |
| 8 17 34 | 49 0½ | 11 35½ | 37 25 | 41½ |

Pone distantiam æquat. 37 25

N.B. Postea denuo obseruabatur ¶ iuxta Merid. per Sext. trig.

| | Inter ¶ & Aldeb. | Ocul. ¶ occ. |
|---------------------|------------------|--------------|
| 11 ^H 7¼' | 36 0¼ | 31 10 |
| 11 10½ | 36 0¼ | 31 58 |
| 11 13½ | 36 0¼ | 32 39 |

Postea obseruabatur ¶ a corde Ω in hunc qui sequitur modum.

11 16½ ¶ a corde Ω per Sext. 44 27

Alt. cordis Ω 33 10

¶ erat iuxta Meridianum.

11 19½ ¶ a corde Ω per Sext. 44 27 Distabat Aldeb.

a mer. occ. 34 9½

11 21½ ¶ a corde Ω per Sext. 44 27 Distabat Aldeb.

verf. occ. 34 39

11 27 Declin. ¶ per Armillas 23 15½

Alt. pinnac. 23 15½

11 32 12" Transiit ¶ meridianum & habuit Alt. per Q. volub. 57 22½¹

Hinc poterit verificari exacte satis locus ¶ iuxta Solis oppositum, vice-versa distantias examinando cum declinatione.

Vt tempora exactius constent, obseruabatur vna distantia Aldeboræ a Meridiano, hincque limitari possunt tempora per horologium indicata in superioribus obseruationibus.

Vt vero tam tempora horologij, quam ipse locus ¶ diligentius examinetur, obseruabatur etiam per Ar-

millas æquatorias in hunc qui sequitur modum.

| | Aldeb. occ. | ¶ occ. | Diff. æquat. |
|----------|-------------|--------|--------------|
| 11 41 14 | 39 35½ | 2 12 | 37 23½ |
| 11 42 50 | 40 2 | 2 38½ | 37 23 45 |
| 11 44 35 | 40 27 | 3 3½ | 37 23 40 |

Pone itaque distantiam æquatoriam 37 23½

Postea obseruabatur ¶ a corde Ω

| | Cor Ω or. | ¶ occ. | Diff. æquat. |
|----------|-----------|--------|--------------|
| 11 48 52 | 41 53 | 4 7 | 46 0 |
| 11 51 0 | 41 23 | 4 36¾ | 45 59¾ |
| 11 53 10 | 40 50 | 5 10 | 46 0 |
| 11 54 57 | 40 24½ | 5 35¾ | 46 0½ |

Pone itaque differentiam ascensionalem 46 0

Declin. ¶ vno pinnac. 23 16½

Altero 23 16¼

Ergo 23 16½

DIE 27 DECEMBRIS.

7^H 4¼' Decl. ¶ vno pin. 23 19
altero 23 18¾

| | ¶ or. | Oculus ¶ or. | Diff. æquat. | Alt. |
|---------|-------|--------------|--------------|-------|
| 7 9 58 | 63 58 | 26 43 | 37 15 | |
| 7 12 0 | 63 28 | 26 14 | 37 14 | |
| 7 13 36 | 63 1½ | 25 46 | 37 15½ | 32 30 |
| 7 15 10 | 62 39 | 25 23 | 37 16 | |
| 7 17 34 | 62 2½ | 24 46½ | 37 16 | 34 0 |

Non fuit admodum serenum.

DIE 31 DECEMBRIS.

7^H 30' 0" Inter ¶ et 35 23 bis
Aldeb. per 35 24 semel
Sext. 35 23½ bona
7 44 Inter ¶ & infer. ¶
per Sext. 10 46½
repetita 10 46
tertio 10 46½

Postea per Armillas

| | ¶ or. | Aldeb. or. | |
|-------|--------|------------|--------------------|
| 7 47 | 54 20½ | 17 38 | 36 42½ |
| 7 49¼ | 53 47½ | 17 6 | 36 41½ |
| 7 50½ | 53 27½ | 16 47¾ | 36 40 ² |
| 7 52½ | 52 59½ | 16 17½ | 36 42½ |
| 7 54½ | 52 31 | 15 49¼ | 36 41 45 |

¹ Postea adscripsit Tycho: »Nota. Poterit altit. esse 57½ 23', nam stellæ fixæ hoc docent sequentes. Pone declin. 23 17½«.

² Lineis inducta. Adscriptum est: incerta.

Pone itaque distantiam æquatori-
am ab Aldeb. part. 36 M. 42, & insen-
sibiliter aberrabis.

Confer autem Asc. rectam ex di-
stantijs per Sextantem suprascriptis.

Declin. ¶ accipiebatur circa hæc
tempora per Armillas maiores

vno pinnac. 23 20
altero 23 20½

Fuit autem alt. ¶ circa hæc tem-
pora per Q. minimum circiter 40 gra-
dus, vnde nullam habuit sensibilem
refractionem.

LOCA IOVIS¹.

Pro loco ¶^{is} die 25 Octobris H. 5
M. 0 A. M.

H. 5 M. 0 Distantia inter ¶ & Aldeb.
41 37

per Sext. Δ

Decl. ¶ 22 36 Bor.

Declin. Aldeb. 15 36½ Bor.

La. BA 74 23½

La. CA 67 24

La. BC 41 37

Angulus CAB 43 34½ Differentia Asc.
rect. ¶ ab oculo ∪

63 6² Asc. rect. Aldeb.

106 40½ Ascen. rect. ¶^{is}.

H. 5 M. 5 Inter ¶ & cor Ω 38 45½
etiam per Sext.

Declinatio ¶ ut prius 22 36

Declin. cordis Ω 13 57½

Latus FG 67 24

Latus FH 76 2½

Latus GH 38 45½

Angulus HFG 39 55½ D^{ia} Asc. ¶
a corde Ω

Ascen. rect. Reguli 146 35½

Ascen. rect. ¶ 106 39½

Accepta est itaque Ascen. rect. ¶

106 40

ad H. 5 M. 0

Declinatio 22 36 B.

Resp. Longitudo ¶ 15 21½ ∞

Latitudo 0 1¼ M.

Sequuntur Demonstrationes suppu-
tationum pro inventis locis ¶ circa ∅
ejus cum simplici ∅ videlicet ad Diem
15. 22. & 26. Decembris.

Die 15 Decembris H. 5½ A. M.

Distantia æquat. ¶

a corde Ω 44 20 30

Distantia æquat. ¶

a spica ♄ 93 40 45

Ascensio recta cordis Ω 146 33 30

Ascensio recta spicæ ♄ 195 53½

Asc. rect. ¶ a corde Ω 102 13 0

Asc. rect. ¶ a spica ♄ 102 12 30

Asc. recta emendata 102 12 50³

Declinatio ¶ 23 7½ B.

Debet potius esse 8½

Resp. Longitudo 11 12 28 ∞

Latitudo 0 4 40 B.

potius 5 40

Die 22 Decembris H. 10.

Ascensionis rectæ diff.

inter ¶ & Ald. 37 58

Ascensio recta Aldeboræ 63 4 35

Ergo Ascensio recta ¶ 101 2 35

Declinatio ¶ B. 23 14½

Resp. Longitudo 10 8½ ∞

Latitudo 0 6½ B.

N. B. Ego hinc postea limitaui ex
obseruationibus fixarum in declina-
tione accipiens vtpote superioris &
inferioris capitis ¶ die 26 Decembris,

¹ E codice V.

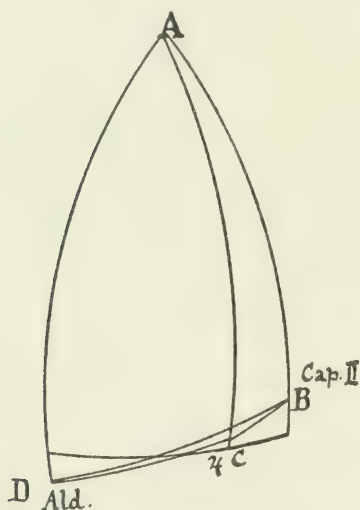
² »4½ corr.« add. manus altera.

³ In margine altera manu: »Ambæ fixæ ab orientali cœli parte fuerunt, quapropter different. Ascen. rectæ
ambiguæ sunt«.

& inuenta est vtriusque declinatio quasi vno minuto deficiens, quare & hinc ꝓ declinationem vno ferme minuto augendo non inconuenienter eius etiam latitudinem vno ferme scrupulo augebimus, vt sit ea p. 0 M. 7 ad minimum absque parallaxi.

Die 26 Decembris pro loco ꝓ triplici calculi apodixi ex Observationibus ex solis distantijs.

| | |
|------------------------------|----------------------------------|
| I. | |
| H. 7 $\frac{1}{2}$ Distantia | { Aldeb. 36 1 0 |
| inter ꝓ & { | Inf. cap. II 10 11 $\frac{1}{2}$ |
| Aldeboræ { | Long. 4 0 50 II |
| | Lat. 5 31 0 M. |
| Infer. cap. II { | Long. 17 31 20 66 |
| | Lat. 6 38 0 B. |



| | |
|-----|----------------------------|
| I. | Triangulum DAB. |
| | Dantur DA 95 31 0 |
| | BA 83 22 0 |
| | DAB 43 30 30 |
| | Ergo DB 45 5 $\frac{1}{2}$ |
| II. | ADB. |
| | Dantur DA 95 31 0 |
| | DB 45 5 30 |
| | BA 83 22 0 |
| | Ergo ADB 74 55 20 |

| | |
|----------|-------------|
| III. | BD 45 5 30 |
| | DC 36 1 0 |
| | BC 10 11 30 |
| Ergo DBC | 7 10 30 |
| et ADC | 82 5 50 |

| | |
|---------|-------------|
| IV. | DA 95 31 0 |
| | DC 36 1 0 |
| | ADC 82 5 50 |
| Ergo CA | 89 50 40 |
| et DAC | 35 37 20 |

Patefcit igitur { Longitudo 9 38 10 66
hoc modo ꝓ { Latitudo 0 9 20 B.

| | |
|---------------------------|-------------------------------|
| II. | |
| H. 8 M. 7 Distant. æquat. | ꝓ ab Ald. 37 25 $\frac{1}{2}$ |
| Ascensio recta | |
| Aldeboræ 63 4 35 | |
| Ergo Ascensio recta ꝓ | 100 30 0 |
| Declinatio ad sum- | 23 17 30 |
| mum ex altid. Mer- | |
| rid. collatis alia- | 9 38 $\frac{1}{2}$ 66 |
| rum stellarum alti- | |
| tudinibuseodem in- | 0 7 $\frac{1}{2}$ B. |
| strumento acceptis | |
| Resp. Longitudo | 0 7 $\frac{1}{2}$ B. |
| Latitudo | |

| | |
|--------------------------------|---------------------------------|
| III. | |
| ꝓ viceversa ab Ald. & corde 66 | |
| H. 11 $\frac{1}{2}$ Distant. { | Ald. 36 0 15 |
| | cord. 66 44 27 0 |
| Ascensio recta | |
| Aldeboræ 63 4 35 | |
| Ascensio recta | |
| cordis 66 146 33 $\frac{1}{2}$ | |
| Decl. { | Aldeboræ 15 36 $\frac{1}{2}$ B. |
| nat. { | cordis 66 13 57 $\frac{1}{2}$ |
| Declinatio ꝓ | |
| ut prius 23 17 30 B. | |
| Ang. d ^{re} Asc. | |
| ab Aldeb. 37 25 10 | |
| Hinc Asc. recta ꝓ | |
| Ang. d ^{re} Asc. | |
| a corde 66 46 4 0 | |
| Hinc Asc. recta ꝓ | |
| Asc. Recta ꝓ | |
| limitata 100 29 35 | |
| Resp. Longitudo | 9 37 50 66 |
| Latitudo | 0 7 10 B. |

Pro δ γ cum simplici \odot ^{lis}.

Ad horam igitur $11\frac{1}{2}$ retinendo eandem γ Longitudinem quæ viceversa tunc observata reperitur, videlicet $9\ 37\ 50\ \odot$, cui reliquæ observationes, habita ratione interstitij temporis, satis præcise astipulantur, et conferendo antecedentium dierum observata $\varphi\alpha\iota\nu\acute{o}\mu\epsilon\nu\alpha$ γ cum hoc, pro motu diurno ejus constituendo una cum Tabulis et Ephem. ex Copernico & Alphonsinis concinnatis (dabamus enim ex his omnibus conciliatis γ ^{vi} motum diurnum $7'\ 45''$, quo ab hoc tempore ad δ usque usi sumus) invenitur γ fuisse in δ cum simplici \odot Die 21 Decemb. H. 18 M. 30.

Longitudo ejus $10^{\circ}\ 14\frac{1}{2}'\ \odot$

Latitudo $0\ 6\ 0\ B.$

....cta
parallaxi $30''$

Pro interfectione γ Borea
per Eclipticam.



BC $0^{\circ}\ 6'\ 0''$
BAC $1\ 40\ 0$
ABC rectus
Ergo BA $3\ 26\ 0$
 $\odot\ 10\ 15$

Secat igitur γ Eclipticam ratione Latitudinis ascendendo in $6^{\circ}\ 49'\ \odot$.

Si assumitur maxima Latitudo γ B. $1^{\circ}\ 38'$, fit latus BA $3^{\circ}\ 30'$, et propterea interfectio in $6^{\circ}\ 45'\ \odot$.

Die 21 Decemb. H. 18 M. 50.

Collatio calculi Copernici & Alphonsi in γ .

| | Long. | Latit. |
|--------------------|------------------------|----------------------|
| Calculus Copernici | $9^{\circ}\ 50\ \odot$ | $0^{\circ}\ 37'\ M.$ |
| Calculus Alphonsi | $9\ 59\ \odot$ | $0\ 9\ M.$ |
| Observatio dedit | $10\ 15\ \odot$ | $0\ 6\ Bor.$ |

Pro latitudine γ .

N. B. Si constituerimus \odot nodum Boreum γ in fine 7 gradus \odot ad annum 1586 completum, insensibiliter aberrabimus. Nam collatione facta cum observatis anni 1593, vbi latitudo observata M. $17\frac{1}{2}$ meridionalis requirebat vt nodus austrinus esset in Medietate octavi gradus γ , detrahemus illi quasi dimidium gradum propter refractionum impedimenta & huic addemus quasi $\frac{1}{2}$ gradus partem propius videlicet ad hanc observationem liberam a refractionibus accedendo.

OBSERVATIONES MARTIS.

DIE 23 SEPTEMBRIS.

| | | |
|---|---------------------|---------------------|
| 5 ^H 12 ^M P. M. N. Declin. δ B. | 18 | 5 $\frac{1}{2}$ |
| Alt. pinnac. | 18 | 5 $\frac{1}{4}$ |
| Infer. caput II or. | δ ad. or. | Dist. æquat. |
| 5 20 | 21 15 | 47 35 |
| 5 23 | 20 23 $\frac{1}{2}$ | 46 45 |
| 5 25 $\frac{3}{4}$ | 19 50 $\frac{1}{2}$ | 46 12 $\frac{1}{4}$ |
| | | 26 20 |
| | | 26 21 $\frac{1}{2}$ |
| | | 26 21 $\frac{3}{4}$ |

Pro loco δ

| | |
|--|----------------------------|
| H. 5 $\frac{1}{2}$ Differ. Ascens. R. inferioris II & δ | 26 21 |
| Ascens. R. infer. cap. II | 109 59 |
| Ascens. Recta δ | 136 20 |
| Declin. δ B. or. | 18 5 $\frac{1}{2}$ |
| Resp. Longitudo δ | 13 27 $\frac{1}{2}\ \odot$ |
| Latitudo | 1 18 $\frac{1}{2}\ B.$ |

Collatio inuenti loci cum calculo Alphonsino & Coperniano.

| ♂ | Ex obseruatione | Calc. Alpho. | Calc. Coper. |
|--|-----------------------|--------------|--------------|
| H. 5 $\frac{1}{2}$ Long. 13 27 $\frac{1}{2}$ ♀ | 12 54 ♀ | 13 56 ♀ | |
| Lat. 1 18 $\frac{1}{2}$ B. | 0 41 $\frac{1}{2}$ B. | 0 35 B. | |

DIE 24 SEPTEMBRIS A. M.

| | |
|---|---------------------|
| 3 ^H 55 ^M Declin. ♂ Bor. | 17 56 $\frac{1}{2}$ |
| Infer. caput ♀ | Dift. æquat. |
| II or. orient. | |
| 3 59 40 58 $\frac{1}{2}$ 67 54 $\frac{1}{2}$ 26 56 | |
| 4 3 $\frac{1}{2}$ 40 8 $\frac{1}{2}$ 67 4 $\frac{1}{2}$ 26 55 $\frac{3}{4}$ | |
| 4 4 39 39 $\frac{1}{2}$ 66 34 $\frac{3}{4}$ 26 55 $\frac{1}{4}$ | |

(Splendor inter obseruandum nobis obfuit.

DIE 10 OCTOBRIS.

| | |
|---|----------------------------|
| H. 1 $\frac{1}{2}$ Inter ♂ & cor ♀ 0 58 | Per radium, |
| Repetita 1 0 | fuitque tunc altit. ♂ G. 9 |

Circa hoc tempus fuit ♂ in recta linea, quæ ducitur a corde ♀ ad supremam ceruicis eiusdem, per lineale fatis exacte, vnde etiam non multum aberat a coniunctione cum corde ♀, id quod etiam linea recta a ♂ versus polum Zodiaci ducta testabatur.

Per Sextantem vero obseruabatur eius distantia circa horam secundam P. M. N. ab eadem stella cordis ♀ 1° 5', cui potius potes fidere quam radio, fuitque ter repetita obseruatio. Erat autem illa distantia saltem quo ad latitudinem, ita vt ♂ eßet corde ♀ borealior tanto interuallo, nam in longitudine quoad visum fatis exacte iungebantur. Id quod sequentes obseruationes scrupulofius inquirent.

| | |
|--|---------------------|
| 2 ^H 24 ^M Distantia inter | 36 36 $\frac{1}{8}$ |
| 2 27 ♂ & infer. caput II | 36 36 $\frac{1}{2}$ |
| 2 28 Eadem etiam | 36 36 $\frac{1}{4}$ |
| 2 30 per Sext. Δ | 36 36 $\frac{1}{4}$ |

Fuit circa has obseruationes alt. ♂ 15 part.

| | |
|-----------------------------|-----------------------|
| 2 32 Declin. ♂ per Armillas | 15 3 $\frac{3}{4}$ B. |
| alt. pinnac. | 15 3 $\frac{1}{2}$ |

DIE 22 OCTOBRIS.

| | |
|---|---------------------------------|
| 6 ^H 3 ^M Dift. inter ♂ & cor ♀ | I 6 10 |
| 6 7 Per Sext. Δ | |
| | sub auroram II 6 9 |
| 6 10 | III 6 10 |
| 6 14 Declin. ♂ B. vno | 13 0 $\frac{1}{2}$ |
| | alt. pinnac. 13 0 $\frac{2}{8}$ |

DIE 24 OCTOBRIS.

| | |
|---|---------------------|
| 6 ^H 35 ^M Declin. ♂ B. | 12 39 $\frac{3}{4}$ |
| 6 37 $\frac{1}{2}$ Eadem alt. pinnac. | 12 39 $\frac{1}{2}$ |

DIE 25 OCTOBRIS A. M.

| | |
|---|---------------------|
| 5 ^H 11 ^M Declinatio ♂ | 12 29 $\frac{1}{8}$ |
| 5 12 Inter ♂ et Regulum | 7 40 $\frac{1}{2}$ |
| 5 15 Repetita dift. ♂ & Reg. | 7 40 $\frac{1}{8}$ |
| 5 16 Repetita Decl. ♂ | 12 29 $\frac{3}{8}$ |
| 5 22 Repet. dift. ♂ & cord. ♀ | 7 41 $\frac{1}{8}$ |
| 5 24 Eadem repetita | 7 42 |
| 5 26 Eadem distantia | 7 42 |
| 5 30 Eadem dift. repetita | 7 42 $\frac{1}{8}$ |

Atque his vltimis obseruationibus ♂ a corde ♀ potes potius fidere (erat enim serenius) ponendo eam 7° 42'.

| | |
|---------------------------------------|---------------------|
| 5 32 Declin. ♂ vt prius | 12 29 $\frac{1}{8}$ |
| 5 42 45 Calx ped. II occid. ♂ orient. | 34 59 $\frac{3}{4}$ |
| | 29 50 $\frac{1}{8}$ |
| | 64 50 |
| 5 47 Calx pedis II occ. ♂ orient. | 36 12 $\frac{3}{4}$ |
| | 28 37 $\frac{1}{2}$ |
| Differentia æquat. | 64 50 $\frac{1}{4}$ |

DIE 1 NOUEMBRIS A. M.

| | |
|--|--------------------|
| 5 ^H 6 ^M Declin. ♂ Bor. | 11 2 $\frac{3}{4}$ |
|--|--------------------|

DIE 2 NOUEMBRIS A. M.

Paulo ante horam 4 errorem horologij ad Solem in Meridie antecedente correcti fere nullum ex distantia oculi ☿ a Meridiano deprehendimus.

| | |
|---|-------------------------|
| 4 ^H 39 $\frac{1}{2}$ Inter ♂ & cor ♀ | I 11 58 $\frac{1}{2}$ |
| 4 40 $\frac{1}{2}$ per Sext. Δ | II 11 58 $\frac{3}{4}$ |
| 4 42 | III 11 58 $\frac{1}{2}$ |
| 4 46 $\frac{1}{2}$ Declin. ♂ Bor. | 11 3 |

Horologium in Meridie saltem $\frac{1}{4}$ Minuti tardius ibat, quod erat insensibile.

DIE 8 NOUEMBRIS A. M.

| | |
|--|--------------------|
| 6 ^H 34' Declin. ♂ Bor. | 10 4 $\frac{1}{2}$ |
| Cor ♂ occid. ♂ orient. Dist. æquat. | |
| 6 39 12'' 6 7 $\frac{1}{2}$ 8 42 14 49 $\frac{1}{2}$ | |
| 6 41 $\frac{1}{3}$ 6 38 $\frac{1}{4}$ 8 11 14 49 $\frac{1}{4}$ | |
| 6 42 12 6 52 $\frac{3}{4}$ 7 57 14 49 $\frac{3}{4}$ | |

Pone distantiam ascensionalem 14 49 $\frac{1}{2}$
& Declinationem 10 5, & habebis satis exacte locum ♂.

In distantijs æquatorijs hodie non addebantur 15 illa Minuta vbique, quibus Æquator non respondet vero meridiano, quare pro emendatione horologii hoc erit cauendum.

DIE 10 NOUEMBRIS A. M.

| | |
|---|--|
| Cor ♂ occ. ♂ occ. Dist. æquat. | |
| 7 ^H 19' 48'' 18 24 15 2 34 30 15 49 45 | |
| 7 21 47 18 55 3 2 15 15 52 45 | |
| 7 24 2 19 27 30 3 38 45 15 48 45 | |

Pone differentiam æquator. ♂ a corde ♂ H. 7 M. 20 15^e 50', Declin. Bor. 9 32 $\frac{1}{2}$.

| | |
|--|------|
| 7 ^H 28 $\frac{1}{2}$ ' Repetita Declin. ♂ | 9 33 |
| ♂ occid. Azim. Alt. | |
| 7 30 25 7 0 43 30 | |
| 7 33 20 8 0 43 27 $\frac{1}{2}$ | |
| 7 36 16 9 0 43 24 $\frac{1}{2}$ | |

N. B.¹ Tempora ascripta sunt emendata ad verum Meridianum.

DIE 11 NOUEMBRIS A. M.

| | |
|---|--------------------|
| 4 ^H 19' 50'' Declin. ♂ Bor. | 9 25 $\frac{1}{2}$ |
| ♂ or. Cor ♂ or. Dist. æquat. | |
| 4 24 40 40 26 24 13 $\frac{1}{4}$ 16 12 $\frac{3}{4}$ | |
| 4 26 30 39 59 $\frac{1}{4}$ 23 46 $\frac{1}{2}$ 16 12 $\frac{3}{4}$ | |
| 4 28 15 39 35 23 21 16 14 | |
| 5 14 28 7 $\frac{1}{2}$ 11 51 $\frac{1}{2}$ 16 16 | |
| 5 16 27 34 $\frac{1}{2}$ 11 18 $\frac{1}{2}$ 16 16 | |
| 5 20 $\frac{1}{2}$ 26 27 10 11 16 16 | |

Conuenit itaque vbique quod distantia æquatoria ♂ a corde ♂ fuerit circa hoc tempus 16^e 16'.

Postea obseruabatur ♂ a Spica ♀.

¹ E codice V.

| | |
|---|--|
| Spica or. ♂ or. Dist. æquat. Alt. Spicæ | |
| 6 45 $\frac{1}{2}$ 38 16 $\frac{1}{4}$ 5 17 32 59 $\frac{1}{4}$ 18 ^e | |
| 6 49 37 22 $\frac{1}{4}$ 4 24 32 58 $\frac{1}{4}$ 18 10 | |
| 6 51 36 54 $\frac{3}{8}$ 3 54 $\frac{1}{4}$ 33 0 $\frac{1}{2}$ 18 16 | |
| 6 53 36 15 3 16 $\frac{1}{2}$ 32 58 $\frac{1}{2}$ 18 30 | |
| 6 55 35 50 2 51 32 59 | |
| 6 56 $\frac{1}{2}$ 35 31 2 33 32 58 | |
| 6 58 $\frac{1}{3}$ 35 7 2 6 $\frac{1}{2}$ 33 0 $\frac{1}{2}$ | |

Hæc varietas inde venit, quod Spica minus appareret lucida ob lumen auroræ, vt ob id nimis ampliare pinna-cidia fuerit necessarium, sed ponatur circa hoc tempus ipsius distantia a Spica æquatoria 32^e 59' & nullo scrupulo aberrabitur.

Postea H. 7 M. 2 obseruabatur declinatio ♂ prope Meridianum

vno pinn. 9 24 $\frac{1}{2}$ Bor.
alt. pinnac. 9 24 $\frac{3}{4}$

H. 7 M. 6 45'' transiit ♂ per Meridianum habens Altitudinem max. 43 30 $\frac{1}{2}$. Decl. ex alt. 9 25 0

Patet itaque quod declinatio ex altitudine Meridiana non differat ab ea, quæ per Armillas accipiebatur, nisi $\frac{1}{2}$ scrupulo insensibili.

Horologium in Meridie celerius ibat M. 1 55'', qui error saltem est ab Hora matutina H. 3 $\frac{5}{8}$.

DIE 23 NOUEMBRIS A. M.

H. 5 $\frac{1}{8}$ Horologium verificatum est ad stellas.

6^H 15' Declin. ♂ B. vno 7 19 $\frac{3}{4}$
alt. pinnac. 7 20
Alt. meridiana ♂ per Q. Tich. nouo pinn. 41 25 $\frac{1}{8}$
vet. pinn. 41 25

| | |
|--|--|
| Spica or. ♂ occ. Dist. æquat. | |
| 7 14 $\frac{1}{2}$ 18 21 9 11 27 32 | |
| 7 15 $\frac{1}{2}$ 18 5 $\frac{3}{4}$ 9 27 $\frac{1}{2}$ 27 33 $\frac{1}{4}$ | |
| 7 16 $\frac{3}{8}$ 17 48 $\frac{1}{2}$ 9 44 27 32 $\frac{1}{2}$ | |

Pone itaque hic dist. æquat. 27 32 $\frac{1}{2}$

| | |
|--|--|
| Cor ♂ occid. | |
| 7 19 32 8 10 21 $\frac{1}{2}$ 21 46 $\frac{1}{2}$ | |
| 7 20 $\frac{1}{3}$ 32 26 10 39 $\frac{3}{4}$ 21 46 $\frac{1}{4}$ | |
| 7 21 $\frac{1}{3}$ 32 43 10 57 21 46 | |
| 7 22 $\frac{1}{2}$ 33 2 11 15 $\frac{1}{2}$ 21 46 $\frac{1}{2}$ | |

OBSERVATIONES VENERIS.

DIE 4 NOUEMBRIS P. M.

H. 4 M. 36½ Alt. ♀ 6½ G.
Declin. ♀ 25 47½ M.
4 40¼ ♀ in Azim.
aßignato 20 10 occ.
Alt. eius
per Q. Volub. 6 6½
Declin. Merid. 25 48½

Vt vero de tempore & azimuthis certi eßemus, mox lucidam Vulturis obßeruauimus per idem instrumentum in certo Azimuto atque altitudine vt fequitur.

| | Azimut | Altitudo |
|-------------------------------|-----------|----------|
| 4 ^H 52' 55" Vultur | 12 0 occ. | 41 26 |
| 4 56 0 | 13 0 | 41 20½ |
| 4 59 5 | 14 0 | 41 14½ |
| 5 2 10 | 15 0 | 41 8½ |
| 5 5 10 | 16 0 | 41 1 |
| 5 8 15 | 17 0 | 40 55 |

Azimuta sunt ex noua reßtitutione Meridiani ante biduum facta, Horologium in Meridie correctum. Sed caueatur reßraçtio Veneris.

Postea pro tempore verificando obßeruabatur Vultur in distantia æquatoria a Meridiano.

| | |
|----------------------------|--------|
| H. 5 M. 15 30" Vultur occ. | 14 35 |
| 5 16 55 | 14 55 |
| 5 18 0 | 15 11½ |

Ex his colligitur, posita Asc. Recta Lucidæ Vulturis 292 41 & Asc. Recta ☉ 229 17 ex propria reßtitutione vtriusque, quod Horologium a Meridie hucusque citius iusto promotum fuerit 4½' fere. Verum animadvertendum quod Horologium correctum erat ad nouam Meridiani inuentionem, Armillæ vero ad veterem monstrabant, ideoque vno minuto exacte tardius. Quare non deficiunt re vera in Horologio nisi 3½' quibus citius ibat, atque his obßervationibus tam in ♀ quam ☿ ad hanc temporis correctionem bene limitatis potes satis certo

fidere. Erat enim bene serenum & tranquillum.

In Meridie proxime sequenti Horologium 7 Minutis iusto velocius ab H. 5½ vespertina promotum fuisse, Solis transitus per Meridianum indicauit.

DIE 6 NOUEMBRIS P. M.

4^H 40' Inter ♀ & occ. limbum ☿ 29 52½
4 41½ Eadem distantia 29 53½
4 44½ Repetita, per Sext. 29 54

Fuit circa hæc tempora alt. ♀ 5½ G. per Q. minimum.

4 45½ Fuit rursus dist. ♀ & ☿ vt prius accepta per Sext. 29 55
4 48½ Alt. ♀ 5 35, Azim. 23 0
4 49½ Dist. ♀ a ☿ vt prius 29 55½
4 51½ Eadem repet. dist. 29 56½
4 56½ Declin. ♀ M. 25 40¾
Dist. æquat. a Vulture 13 40
4 57 2 Alt. ♀ 5⁸ 5', Azim. 25 0
4 59½ Repetita Declin. ♀ 25 40¾
Dist. æquat. a Vulture 13 40 vt prius.

5 4 Repetita Declin. ♀ M. 25 40¾
Dist. æquat. vt prius 13 40
Fuit circa hæc tempora alt. ♀ 4¾. His obßervationibus ♀ & ☿ potes latis tuto fidere, modo tempora rite examinentur¹.

DIE 7 NOUEMBRIS P. M.

| | Inter ♀ & ☿ limb. occ. per Sext. | | Alt. ♀ per Q. min. |
|------------------------|-------------------------------------|---------------------|----------------------------------|
| 4 ^H 18'55'' | 40 | 55 | 7 $\frac{1}{6}$ |
| 4 22 20 | 40 | 56 $\frac{2}{3}$ | 6 $\frac{5}{6}$ |
| 4 27 0 | 40 | 58 | 6 $\frac{2}{3}$ |
| 4 28 25 | 40 | 59 | 6 $\frac{1}{2}$ |
| 4 30 15 | 40 | 59 $\frac{1}{6}$ | 6 25 |
| 4 32 0 | 41 | 0 | 6 $\frac{1}{3}$ |
| | Altitudo ♀ | Declin. ♀ Mer. | Dist. æquat. ♀ & occ. limb. ☿ |
| 4 36 40 | 6 17 | 25 39 $\frac{1}{2}$ | 40 46 $\frac{1}{2}$ |
| 4 38 40 | 6 9 | 25 39 $\frac{1}{2}$ | 40 46 $\frac{1}{2}$ |
| 4 42 30 | 6 0 | 25 38 $\frac{1}{2}$ | 40 47 $\frac{1}{6}$ |
| 4 44 55 | 5 50 | 25 38 | 40 47 $\frac{1}{2}$ |
| 4 47 30 | 5 40 | 25 37 $\frac{1}{2}$ | 40 48 $\frac{1}{2}$ |

¹ De verificatione temporis vide supra p. 36, inter obßervationes lunæ.

5 11 ♀ a Vulture, dist. æquat. 12 20
Declin. ♀ 25 36 M., Altit. 4 20
5 15½ ♀ a Vult. dist. æquat. 12 19½
Declin. ♀ 25 35½ M., Altit. 3 55

Postea non poterat ♀ amplius obseruari, sed his vt ere correcto tempore & cæteris vt decet.

N. B. In distantijs æquatorijs hodie non addebantur 15 illa minuta vbi que, quibus Æquator non respondet vero Meridiano, quare pro emendatione Horologij hoc erit cauendum.

DIE 10 NOUEMBRIS.

4^H26' 13" Distabat ♀ a Mer. ad occ. 18 41
4 27 48 ♀ occ. 19 15
Tunc fuit declin. ♀ M. 25 24
4 28 47 ♀ occ. 19 32
4 30 35 ♀ occ. 19 58
Hinc potest verificari horologium.
4 38½ Declin. ♀ 25 25½
Alt. ♀ 6½ per Q. minimum.
4 41 Alt. ♀ 6 20, Declin. 25 22½
4 44½ Alt. ♀ 6½, Declin. 25 22½
Declin. Dist. æquat. ♀ Alt.
♀ a lucida ♀ ♀
4 51 25 22 M. 101 57
4 53½ 25 22 101 55
4 56 25 21¾ 101 55½ 5 30

DIE 11 NOUEMBRIS P. M.

4^H28½' Declin. ♀ Austr. 25 17½, Alt. 7½
4 46 25 16¾ 6 36
Postea, quia nullæ aliæ stellæ apparebant, e quibus ♀ commodè accipi posset, e planeta ♄^{no} eius locus in hunc modum.

| Alt. ♄ | Alt. ♀ | Declin. ♀ | Dist. æquat. ♄ & ♀ |
|------------|--------|-----------|--------------------|
| 4 52 14 12 | 6 15 | 25 16½ | 100 34 |

Postea paulo accuratius

| | | | |
|-------------|------|--------|---------|
| 4 55½ 14 30 | 6 10 | 25 16 | 100 33¼ |
| 4 58¾ 14 57 | 5 50 | 25 15¾ | 100 33½ |
| 5 2¼ 15 27 | 5 40 | 25 15¼ | 100 32¾ |

Hinc poterit verificari locus ♀ restituito prius loco ♄ e sequentibus obser-

uationibus, vbi ♄ obseruatio annotatur.

Postea obseruabatur ♀ a lucida ♀ in hunc modum.

| Alt. luc. ♀ | Alt. ♀ | Declin. ♀ | Dist. æquat. ♀ a luc. ♀ |
|-------------|--------|-----------|-------------------------|
| 5 5 26 11 | 5 30 | 25 15 | 100 40½ |
| 5 8¾ 26 52 | 5 20 | 25 14¾ | 100 40 |
| 5 12 27 21 | 5 5 | 25 14½ | 100 39½ |
| 5 16 28 0 | 4 50 | 25 14 | 100 38½ |
| 5 20 28 55 | 4 30 | 25 13¾ | 100 37 |

Hinc poterit verificari locus ♀, ea tamen ratione, vt habeatur respectus tum refractionis in tam decliui situ, tum etiam parallaxeos. Considerandum vero, quod refractionis in ♀ in tanta declinatione aliter se habeat, quam si iuxta æquatorem foret, cuius rei faciendum erit periculum¹.

DIE 13 NOUEMBRIS P. M.

4^H50½' Declin. ♀ Austr. 25 1, Alt. 6½.
Azim. ♀ a merid. ad occ. Alt. ♀
4 58 14" 23 0 6 17½
5 0 30 23 30 6 10
5 2 56 24 0 6 1¼
5 5 28 24 30 5 54

| Alt. ♀ | Decl. ♀ | Dist. æquat. ♀ a lucida ♀ |
|------------------------|---------|---------------------------|
| 5 10 5 30 | 25 0 | 98 9½ |
| 5 13½ 5 20 | 24 59½ | 98 8 |
| 5 18 5 0 | 24 58½ | 98 7 |
| 5 21½ 4 50 | 24 58¼ | 98 6½ |
| 5 24 46 Luc. Vult. occ | | 27 3½ |
| 5 25 19 | | 27 9½ |
| 5 26 0 | | 27 20 |

Hinc potest horologium verificari.

DIE 16 NOUEMBRIS P. M.

4^H 4' 39" Distabat ♀ a mer. ad occ. 13 46½
4 6 17 ♀ occidentalis 14 15
Hinc potest horologium emendari.

¹ De verificatione Horologii cf. supra p. 38 sq.

| | Azim. a mer. ad occ. | Altit. ♀ | Declin. ♀ |
|---------|-------------------------|-------------|--------------|
| 4 10 35 | 14 30 | 8 25 | 24 34½ |
| 4 12 51 | 15 0 | 8 20½ | |
| 4 15 9 | 15 30 | 8 15¼ | 24 34½ |
| 4 17 23 | 16 0 | 8 11 | |
| 4 19 48 | 16 30 | 8 5½ | 24 34 |
| 4 21 57 | 17 0 | 8 0 | |
| 4 24 13 | 17 30 | 7 54½ | 24 33½ |
| 4 26 15 | Vultur occ. | | 18 33 |
| 4 27 23 | | | 18 50 |
| 4 28 19 | | | 19 3 |
| 4 29 5 | | | 19 14½ |

Hinc poteris Horologium exacte verificare.

| | Altit. ♀ | Declin. ♀ | Dift. æquat. ♀ a Luc. ♀ |
|----------------------------|-------------|--------------|----------------------------|
| 4 36 20 | | 24 33 | 94 27½ |
| 4 40 0 | | 24 33½ | 94 28 |
| 4 43 16 | 7 10 | 24 33 | 94 27½ |
| 4 46 53 | 6 50 | 24 32¾ | 94 27¾ |
| 4 50 20 | 6 40 | 24 32½ | 94 27¾ |
| 4 54 20 | 6 30 | 24 32½ | 94 26¾ |
| 4 56 50 | 6 18 | 24 32½ | 94 27 |
| 4 59 48 | 6 10 | 24 32½ | 94 27 |
| 5 2 45 | 6 0 | 24 32 | 94 26½ |
| Pro Horologio rectificando | | | |
| 5 6 0 Lucida ♀ or. | | | 64 50 |
| 5 7 19 | | | 64 30½ |
| 5 8 19 | | | 64 15½ |

DIE 17 NOUEMBRIS P. M.

| | | |
|--------|------------------|--------|
| 5 3 54 | Dift. luc. Vult. | 25 12½ |
| 5 5 0 | a Meridie occ. | 25 31 |
| 5 5 34 | | 25 40 |

Hinc poteris Horologium verificare.

| Tempus corr. | Altitudo ♀ | Declinatio ♀ | Dift. æquat. a luc. ♀ |
|-----------------|---------------|-----------------|--------------------------|
| 5 8 2 | 6 25 | 24 20½ | 93 13 |
| 5 12 11 | 6 10 | 24 20 | 93 13 |
| 5 14 50 | 6 0 | 24 20 | 93 13 |
| 5 19 41 | 5 40 | 24 19½ | 93 12½ |
| 5 22 30 | 5 25 | 24 19 | 93 12½ |

DIE 23 NOUEMBRIS P. M.

| Tempus | Altitudo ♀ | Declinatio ♀ Mer. | Dift. æquat. a luc. ♀ |
|--------|---------------|----------------------|--------------------------|
| 4 42 | 9 5 | 23 5¾ | 86 1 |
| 4 49 | 8 40 | 23 5¼ | 86 1 |

| | | | |
|-------|------|-------|------------|
| 4 54 | 8 20 | 23 5¾ | 86 2 dubia |
| 5 0 | 8 10 | 23 5¾ | 86 0½ |
| 5 5 | 8 0 | 23 5½ | 86 1 |
| 5 10 | 7 50 | 23 5 | 86 0½ |
| 5 13½ | 7 40 | 23 4¾ | 86 0 |

DIE 25 NOUEMBRIS

Ad Vesperas.

| H. M. | Alt. ♀ | Decl. ♀ Au. | Dift. æquat. ♀ a luc. ♀ |
|-------|--------|-------------|----------------------------|
| 4 43 | 9 13 | 22 35¾ | 83 41½ |
| 4 48 | 8 56 | 22 35½ | 83 41 |
| 4 52 | 8 48 | 22 35 | 83 40 |
| 4 54½ | 8 39 | 22 35 | 83 39¾ |

DIE 28 NOUEMBRIS P. M.

| Tempus | Alt. ♀ | Azim. ♀ occ. |
|-----------------------|--------------|--------------|
| 4 4 23 | 11 45 | 10 30 |
| 4 10 42 | 11 34½ | 12 0 |
| 4 14 56 | 11 27 | 13 0 |
| 4 19 10 | 11 18 | 14 0 |
| 4 23 22 | 11 10 | 15 0 |
| 4 27 33 | 11 0½ | 16 0 |
| 4 31 39 | 10 50½ | 17 0 |
| 4 36 0 | 10 40 | 18 0 |
| 4 40 12 | 10 28½ | 19 0 |
| 4 44 25 | 10 16½ | 20 0 |
| 4 51 40 | Decl. ♀ Mer. | 21 36½ |
| Dift. æquat. a luc. ♀ | | 80 11½ |

Sed erat solutum instrumentum, unde non erat satis certa hæc observatio.

5^h 30' 30" Pro rectificando horologio observabatur lucida ♀ distans a meridiano 47 14.

DIE 29 NOUEMBRIS

Ad Vesperas.

| | Azim. ♀ occid. | Altitudo |
|--|----------------|----------|
| 5 ^h 12' 16" | 26 0 | 9 10 |
| Distabat eodem momento lucida ♀ a meridiano ad ortum 51 21 | | |
| 5 14 30 | 26 30 | 9 2½ |
| 5 16 45 | 27 0 | 8 52 |
| Distabat tunc lucida ♀ vt ante 50 15½ | | |

DIE 1 DECEMBRIS P. M.

Posito vno Armillarum pinnacidio in $20^{\circ} 0'$ fixo, obseruabatur ♀ a Meridiano in distantia æquatoria per instrumentum solutum.

| | | |
|------------------------|----------|--------------------|
| 3 ^h 52' 20" | ♀ occid. | 7 5 |
| 3 54 8 | | 7 30 $\frac{1}{4}$ |
| 3 55 20 | | 7 48 $\frac{1}{2}$ |
| 3 55 50 | | 7 57 |
| 3 56 45 | | 8 10 $\frac{1}{2}$ |
| 3 58 30 | | 8 36 $\frac{1}{4}$ |
| 4 0 30 | | 9 6 |

Hinc potest Horologium verificari.

| Tempus | Azim. ♀ occ. | Altit. ♀ | Declin. ♀ M. |
|---------|-----------------|---------------------|---------------------|
| 4 21 55 | 14 0 | 12 13 $\frac{1}{2}$ | 20 53 |
| 4 24 3 | 14 30 | 12 9 $\frac{1}{2}$ | |
| 4 26 4 | 15 0 | 12 5 | |
| 4 28 10 | 15 30 | 12 0 $\frac{1}{2}$ | 20 52 $\frac{1}{2}$ |
| 4 30 25 | 16 0 | 11 55 $\frac{1}{4}$ | 20 52 $\frac{1}{8}$ |
| 4 32 29 | 16 30 | 11 50 $\frac{1}{2}$ | |
| 4 34 35 | 17 0 | 11 45 $\frac{3}{4}$ | |
| 4 36 40 | 17 30 | 11 41 | |
| 4 38 40 | 18 0 | 11 35 $\frac{1}{4}$ | |
| 4 41 9 | 18 30 | 11 29 $\frac{1}{4}$ | |

Pro verificando autem loco ♀ obseruabatur eius locus per Armillas Zodiacales a lucida ♀ vt sequitur.

H. 5 M. 7 Posito loco lucidæ ♀ in $1^{\circ} 55'$ ♀ videbatur ♀ in $6^{\circ} 25'$ ♀. Fuit tunc Alt. ♀ $9^{\circ} 0'$.

5 10 ♀ a lucida ♀ vt prius in $6^{\circ} 25'$ ♀ Alt. ♀ $8^{\circ} 45'$.

5 12 $\frac{1}{2}$ ♀ a lucida ♀ vt prius $6^{\circ} 25'$ ♀ Alt. ♀ $8^{\circ} 30'$.

Postea reiterabatur declin. ♀ & inueniebatur ea H. 5 M. 15 part. 20 M. 51 $\frac{1}{4}$ Merid. Postea pro Armillis examinandis obseruabatur aliqua stella fixa in consimili situ, vt præcedentium obseruationum certitudo explorari queat¹.

¹ Sic in codice, ubi tamen nulla obseruatio alicujus stellæ fixæ reperitur.

² Scilicet post obseruationes lunæ.

DIE 2 DECEMBRIS P. M.

Pro Horologio verificando

| Tempus | ♀ dist. æquat. a Mer. occ. | Azim. ♀ occ. | Altit. ♀ |
|--------------|-------------------------------|-----------------|--------------------|
| Mai. 3 54 44 | 5 48 | 5 41 | 13 22 |
| Min. 3 40 42 | | | |
| Mai. 4 0 0 | 7 2 $\frac{1}{4}$ | 7 0 | 13 5 |
| Min. 3 45 32 | | | |
| Mai. 4 3 56 | 7 57 $\frac{1}{8}$ | 7 49 | 12 49 |
| Min. 3 49 5 | | | |
| Mai. 4 6 21 | 8 30 $\frac{1}{8}$ | 8 24 | 12 40 |
| Min. 3 51 27 | | | |
| Mai. 4 8 36 | 9 5 | 8 55 | 12 28 |
| Min. 3 53 41 | | | |
| Mai. 4 11 19 | 9 45 | 9 35 | 12 20 |
| Min. 3 56 18 | | | |
| Mai. 4 14 5 | 10 24 $\frac{1}{2}$ | 10 10 | 12 15 |
| Min. 3 58 55 | | | |
| Mai. 4 20 58 | 11 59 | 11 39 | 12 0 $\frac{1}{2}$ |
| Mai. 4 5 5 | | | |
| Mai. 4 26 36 | 13 16 $\frac{3}{4}$ | 12 55 | 11 52 |
| Mai. 4 10 23 | | | |
| Mai. 4 29 38 | 14 3 | 13 38 | 11 42 |
| Min. 4 13 25 | | | |
| Mai. 4 32 56 | 14 50 $\frac{1}{4}$ | 14 26 | 11 36 |
| Min. 4 16 32 | | | |

Interea cum distantia ♀ æquatoria a Meridie obseruaretur, accepta est simul eius distantia æquatoria a ♀ vt sequitur. Tempus per Horologium minus est annotatum.

| | | |
|----------------------|---------------|-------------------------|
| 4 ^h 5' 5" | Diff. Asc. R. | I 74 40 $\frac{1}{2}$ |
| 4 10 23 | ♀ & ♀ | II 74 40 |
| 4 13 25 | | III 74 39 $\frac{2}{3}$ |
| 4 16 32 | | IV 74 39 $\frac{3}{4}$ |

Pro Ascens. R. ♀

| | | |
|--------------------|--------------------------|--------|
| H. 4 $\frac{1}{2}$ | Ascens. R. ♀ | 24 57 |
| H. 4 $\frac{1}{8}$ | Differ. Ascens. R. ♀ & ♀ | 74 40 |
| | Ascens. R. ♀ | 310 17 |

DIE 7 DECEMBRIS.

Postea² pro verificando loco ♀ obseruabatur ea a lucida ♀ quæ tunc primum ob crepusculum apparebat, idque in hunc modum.

| | ♀ occid. a Mer. | Dift. æquat. in ♀ & luc. √ | Altit. ♀ |
|---------------|--------------------|-------------------------------|-------------|
| 4 14 35 | 14 26 | 70 19½ | 13 50 |
| 4 18 28 | 15 28 | 70 20½ | 13 45 |
| 4 23 50 Medio | | 70 20 | 13 35 |

Hinc poterit locus ♀ verificari & vna corrigi horologium, fuit autem postea obseruata declinatio ♀ in hunc modum.

H. 4 M. 25 Declin. ♀ vno pinn. 18 52½
altero 18 52½

Erat autem declin. ♀ austrina. Fuit autem tunc alt. ♀ 13½ fere.

DIE 15 DECEMBRIS.

Obseruabatur ♀ appropinquans maximæ remotioni a ☉ in hunc modum. Nota, iuxta perigæum eccentrici. Omnia Azimuta ♀ sunt occ.

| Vesper | ♀ Azim. occ. | Altitudo |
|------------------------|--------------|----------|
| 4 ^H 35' 57" | 19 52 | 16 23½ |
| 4 40 43 | 20 30½ | 16 15½ |
| 4 42 53 | 21 1 | 16 9½ |

Pro verificatione vero temporis præteriti in his obseruationibus & Azimutis verificandis obseruabatur mox stella fixa in hunc modum.

| | | |
|-----------------|-------|--------|
| 4 47 27 Luc. √ | 57 23 | 44 30½ |
| 4 52 10 Az. or. | 55 57 | 45 6½ |
| 4 53 52 | 55 37 | 45 18½ |

N.B. Ex his antecedentibus tribus obseruationibus lucidæ √ potes vt in verificando tempore ita vt quaminimum in his desideretur.

4^H 46' 45" Declin. ♀ 15 49½

| Per Mai. | Per Min. | ♄ orient. | ♀ occ. | Dift. æquat. | Alt. ♀ |
|----------|----------|-----------|--------|--------------|--------|
| 4 32 48 | 4 16 2 | 43 56½ | 16 5½ | 60 1½ | 17 |
| 4 36 40 | 4 19 24 | 43 5 | 16 57 | 60 2 | |
| 4 39 36 | 4 22 1 | 42 25 | 17 35½ | 60 0½ | |
| 4 43 13 | 4 25 22 | 41 34¾ | 18 26½ | 60 1 | |

Pone itaque dist. æquat. inter ♄ & ♀ ad horam 4½ 60 1½ & insensibiliter aberrabis.

| ♀ occ. | Lucida √ or. | Dift. æquat. | Alt. ♀ |
|----------------|-----------------|-----------------|-----------|
| 4 53 52 23 41 | 38 33 | 62 14 | |
| 4 58 31 24 52 | 37 23 | 62 15 | 15½ |
| 5 1 12 25 30 | | | 15 |
| 5 2 corr. | 36 41½ | 62 11½ | dubia |
| 5 4 22 26 19½ | 35 54 | 62 13½ | 14 50 |
| 5 7 16 27 4 | 35 9½ | 62 13½ | 14½ |
| 5 9½ Declin. ♀ | 15 49 | vno pinnacid. | |

Pone circa Horam 5^{am} distantiam æquatoriam Luc. √ & ♀ 62 14 & declinationem ♀ 15 49 & insensibiliter aberrabis.

DIE 16 DECEMBRIS.

| Per Mai. | Per Min. | Az. ♀ occ. | Alt. ♀ | Decl. ♀ |
|----------|----------|---------------|--------|-------------------|
| 3 33 55 | 3 19 33 | 1 57½ | 18 38½ | |
| 3 40 0 | 3 24 20 | 3 23 | 18 36 | |
| 3 42 16 | 3 27 20 | 3 54 | 18 34½ | |
| 3 49 33 | 3 34 12 | 5 38 | 18 30 | 15 25 |
| 3 54 10 | 3 38 30 | 6 47½ | 18 26 | |
| 3 58 43 | 3 34 20 | 8 0 | 18 20 | |
| 4 0 35 | 3 45 15 | 8 30 | 18 18½ | |
| 4 2 44 | 3 47 10 | 9 0 | 18 15½ | |
| 4 6 36 | 3 51 3 | 10 0 | 18 10½ | 15 26 |
| 4 9½ | | | 18 .. | { 15 25½ 15 26 |
| 4 13 31 | 3 58 0 | 11 22½ | | |
| 4 15 40 | 4 0 8 | 11 58¾ | | |
| 4 16 59 | 4 1 27 | 12 18½ | | |
| 4 18 8 | 4 2 31 | 12 35 | | |
| 4 19 23 | 4 3 42 | 12 54 | | |

Postea ♀ accepimus in distantia æquatoria a ♄ & lucida √ partim pro loco & Asc. R. ipsius, partim pro tempore verificando.

| Per Mai. | Per Min. | Luc. V or. | Q occ. | Dist. æquat. | Alt. Q |
|----------|----------|------------|---------|--------------|--------|
| 4 47 58 | 4 29 55 | 41 40 | 19 33½ | 61 13½ | 16½ |
| 4 50 47 | 4 32 37 | 41 2½ | 20 12½ | 61 14½ | 16½ |
| 4 53 48 | 4 35 27 | 40 19½ | 20 57½ | incerta | 16 |
| 4 57 0 | 4 39 0 | 39 24½ | 21 51 | 61 15½ | 16 |
| 5 1 7 | 4 43 22 | 38 20½ | 22 57 | 61 17 | |
| 5 5 28 | 4 47 33 | 37 16½ | 24 1½ | 61 18 | |
| 5 8 1 | 4 50 10 | 36 38½ | 24 39 5 | 61 17½ | 15½ |
| 5 10 53 | 4 53 10 | 35 51½ | 25 27½ | 61 19½ | 15½ |
| 5 14 4 | 4 56 15 | 35 4 | 26 13 | 61 17 | 15 |

Pone distantiam æquatoriam Q iuxta horam 5 p.m. a lucida V 61° 17' & insensibiliter aberrabis.

5^h 1½' per Minus fuit declin. Q 15 23½, alt. pinn. 15 23½. Declinatio ob refractionem minorabatur.

DIE 22 DECEMBRIS P. M.

H. 5 24' 30" h a Meridiano ad ortum 27° 2' per Armillas æquatorias.

Hinc verificetur horol.

Obseruatio Q per Volub.

| | Azim. Q occ. | Alt. Q |
|----------------------|--------------|-----------|
| 5 ^h 25' 3 | 28 21 | 17 24½ |
| 5 28 55 | 29 5 | 17 12½ |
| 5 34 24 | 30 35 | 16 47 |
| 5 39 29 h or. | 23 18½ | pro horo- |
| 5 45 40 h or. | 21 49 | logio |

Nota. Pro loco h potes assumere eum locum qui prouenit ex obseruatione vltima præcedentium dierum, erat enim stationarius.

| | | |
|----------------------|-------|--------|
| 5 47 28 | 33 47 | 15 49½ |
| 5 48 58 | 34 9½ | 15 41½ |
| 5 50 0 | 34 25 | 15 37 |
| 5 51 50 | 34 54 | 15 27½ |
| 5 53 15 Lucida V or. | | 21 5½ |

Hinc rursus potest verificari Horologium, atque hæ obseruationes sunt satis certæ in Venere, modo Horologium rite examinetur & tempora exacte verificentur; erat autem circa limites maximæ remotionis a medio loco ☉, ita tamen (si Ephemeridibus credendum) vt iam per biduum vel triduum antelapsum.

Postea cum paulo melius discuterentur nubes obseruabatur Venus in distantia æquatoria a lucida V.

H. 6 5' 7" Q distabat a Meridiano versus ortum per Armill. æquator.

| | |
|-------------------------|--------|
| | 37 31 |
| Dist. æquator. a luc. V | 55 45½ |
| 6 9 40 Q occident. | 38 49 |
| Lucida V or. | 16 55½ |
| Alt. Q 14 5 | 55 44½ |
| 6 14 12 Q occidentalis | 39 56 |
| Lucida V or. | 15 47½ |
| Alt. Q 13½ | 55 43½ |

Hæc autem varietas poterat se ingerere propter refractionem quæ continebat Venere iam ad occasum sese inclinante, si itaque posueris iuxta Horam 6 distantiam æquatoriam 55 46 habita ratione refractionis, insensibiliter aberrabis, sed confer cum prioribus obseruationibus Azimuti & Altitudinis & postea aliquid certi conclude habita ratione parallaxeos & refractionis in Q.

| | |
|-----------------------------------|--------|
| H. 6 27' 20" Q occident. | 43 13½ |
| Lucida V or. | 12 28½ |
| Alt. Q circiter 12°. Dist. æquat. | 55 42½ |

Patet itaque quod hæc varietas in eo quod distantia æquatoria semper minoratur, fit ratione refractionis & nonnihil etiam occasus Q per motum proprium, quare cauenda venit.

Nota. Horol. εν πλάτει corrigebatur iuxta Meridiem, quare examinandum.

DIE 23 DECEMBRIS P. M.

| | Azim. ♀ occ. | Altit. ♀ |
|-----------------------|---------------------|---------------------|
| 4 ^H 35'50" | 17 33 | 20 7 $\frac{1}{4}$ |
| 4 45 45 | 20 7 | 19 42 $\frac{3}{4}$ |
| 4 47 25 | 20 32 $\frac{1}{2}$ | 19 37 $\frac{1}{2}$ |
| 5 35 15 | 32 29 | 16 38 $\frac{1}{2}$ |
| 5 37 0 | 32 57 | 16 31 |
| 5 38 50 | 33 22 | 16 20 $\frac{3}{4}$ |
| 5 40 38 | 33 50 | 16 12 $\frac{1}{4}$ |
| 5 42 20 | 34 17 | 16 5 |
| 5 44 15 | 34 43 $\frac{1}{2}$ | 15 55 $\frac{1}{2}$ |
| 5 45 40 | 35 3 | 15 50 $\frac{1}{4}$ |
| 5 48 52 | 35 48 | 15 34 |

Sed omnes hæ obſervationes velut & ſequentes inter nubes factæ ſunt, Venere in iſſis aliquantulum ſubinde plus, ſubinde minus deliteſcent.

Accipiebatur etiam inter obſervandum prior diſtantiæ æquatoria ♀ a lucida ♀ & ♀^{no} in hunc modum.

| | |
|---|-------|
| 5 ^H 40' 58" ♀ occ. | 33 7 |
| Lucida ♀ or. | 21 42 |
| Diſt. æquatoria | 54 49 |
| ♀ occ. ♀ or. Diſt. æquat. | |
| 5 47 15 34 40 18 51 $\frac{1}{2}$ 53 31 $\frac{1}{2}$ incerta | |
| 5 49 50 35 23 $\frac{1}{4}$ 18 12 53 35 $\frac{1}{4}$ Alt. ♀ | |
| 5 54 35 36 34 17 1 $\frac{3}{4}$ 53 35 $\frac{3}{4}$ 15 $\frac{1}{6}$ | |

Hora exacte ſexta

| | |
|---|--|
| Declin. ♀ Auft. 12 27 $\frac{1}{4}$ Mer. | |
| Alt. ♀ 14 $\frac{1}{2}$. Alt. pinn. 12 28 | |
| Pone 12 27 $\frac{1}{4}$ | |

Potes itaque circa hoc tempus ponere diſtantiæ æquatoriam ♀ & ♀ 53 35 & conferre cum ea, quæ inter Lucidam ♀ & ♀ accipiebatur, quæ erat numerata 54 49. Locus autem ♀ⁿⁱ ſi hoc vesperti propter nubes haberi nequeat, poteſt deſumi ex prioribus obſervationibus adhibito motu diurno ex Ephemeridibus, qui iuxta hoſce dies proximuseſt, eo quod ♀ prope ſtationem ſecundam verſaretur.

Potes etiam conferre Azimuta & altitudines præſertim iuxta primas obſervationes, tempora autem emendare ex tranſitu & diſtantiæ Lucidæ ♀ & ♀ⁿⁱ a Meridiano poſtea obſerva-

tis. Quamvis hæc ratio vix erit exacta, nam Horologium non erat emendatum a Meridie antecedente hucusque & in Meridie præcedente tantum ἐν πλάτει ad Solem, qui non bene cernebatur, emendatum. Sunt itaque hæ obſervationes mediocres & collatæ invicem, & cum antecedentibus & ſequentibus. Veneris locum iuxta maximam remotionem a Sole vespertinam, Sole in Perigæo Veneris verſante, exhibere ſatis ſcrupuloſe poteram, modo bene limitentur & habeatur ratio tum refractionis tum paralaxeos Veneris.

DIE 26 DECEMBRIS.

Obſervationes ♀ Sole adhuc lucente. Horologium corripiebatur ad Solem H. 12 40' exacte.

| Minus | Azim. ♀ or. | Alt. ♀ |
|------------------------|-------------------|---------------------|
| 2 ^H 51' 48" | 4 15 | 22 43 $\frac{1}{4}$ |
| 2 54 20 | 3 34 | 22 45 |
| 2 55 50 | 3 9 $\frac{1}{2}$ | 22 46 |

Poſtea obſervabatur ♀ a Sole in diſtantiæ per Sextantem vt ſequitur. In ſequentibus ſaltem per minus Horologium obſervabatur.

| | Diſt. ♀ & ☉ per Sext. | Alt. ☉ |
|--------|-----------------------|--------|
| 3 0 40 | 46 33 $\frac{1}{4}$ | 2 50 |
| 3 4 30 | 46 30 | 2 30 |
| 3 6 40 | 46 29 | 2 0 |

Oportet autem conſiderare quod ☉ erat admodum declivius & ponere diſtantiæ 46 30 inſenſibiliter.

Tranſitus ♀ per Meridianum.
H. 3 7' 35" tranſiit ♀ Merid. & habuit Altitud. 22 49 $\frac{1}{2}$

| | Diſt. ♀ & ☉ per Sext. Trig. | Alt. ☉ |
|---------|-----------------------------|--------|
| 3 11 20 | 46 29 | 1 45 |
| 3 13 20 | 46 30 | 1 30 |
| 3 16 30 | 46 29 $\frac{1}{2}$ | 1 10 |

Hæ obſervationes Sole admodum declivi factæ ſunt, vnde habenda ratio refractionis Solaris & pro parte etiam Veneris, alias non conveniet.

Alt. ♀ Merid. per Q. Tich.

| | | | | | |
|-----------------------|--------------|---------------------|------------------------|---------------------|------------|
| | | | | 22 50 $\frac{3}{4}$ | nouo pinn. |
| | | | | 22 50 $\frac{3}{4}$ | alt. pinn. |
| | Azim. ♀ occ. | Alt. ♀ | Declin. ♀ | | |
| 3 ^H 33'22" | 7 3 | 22 36 $\frac{1}{8}$ | 11 14 $\frac{1}{2}$ M. | | |
| 3 36 35 | 7 54 | 22 33 $\frac{1}{8}$ | | | |
| 3 40 15 | 8 51 | 22 29 $\frac{3}{4}$ | | | |
| 3 42 32 | 9 30 | 22 26 | 11 14 $\frac{1}{8}$ | | |
| 3 44 18 | 10 0 | 22 23 $\frac{3}{4}$ | | | |
| 3 46 15 | 10 30 | 22 21 $\frac{1}{2}$ | 11 14 | | |
| 3 48 9 | 11 0 | 22 18 $\frac{1}{2}$ | 11 14 $\frac{1}{2}$ | | |
| 3 50 10 | 11 30 | 22 15 $\frac{1}{8}$ | 11 14 $\frac{1}{8}$ | | |
| 3 51 56 | 12 0 | 22 12 $\frac{3}{8}$ | | | |

Nota. Hæ obseruationes sunt satis certæ, nam cœlum erat apprime serenum & bene correctæ instrumenta, nisi quod si quid erroris fuerit in tempore horologij, quod iuxta Meridiem erat correctum ex Sole H. 12 M. 40 per Armillas æquatorias, illud erit limitandum, prout stellæ postea manifestabunt.

Postea obseruabatur distantia ♀ & ♄ tam per Sextantem quam æquatoria per Armillas in hunc qui sequitur modum.

H. 4 5' Inter ♀ & ♄ per Sext. 54 17 $\frac{3}{4}$

Postea exactius vtroque modo.

| Sequuntur obseruationes ♀. | Per Sextantem. |
|--|-------------------------|
| 4 ^H 7' 20" ♄ or. 36 4 $\frac{1}{2}$ | Dist. ♀ & ♄ |
| ♀ occ. 15 2 $\frac{1}{4}$ | 54 17 $\frac{1}{4}$ |
| Dist. æquat. 51 7 15 | Alt. ♀ 21 40 |
| 4 10 35 ♄ or. 35 18 | Dist. per Sext. |
| ♀ occ. 15 52 | 54 16 $\frac{5}{8}$ |
| Dist. æquat. 51 10 | Alt. ♀ 21 $\frac{1}{2}$ |

Quia vero præcedentes distantiae æquatoriæ non satis conueniunt, ideo repetita est & pinnacidia angustata vt exactius haberi possint.

| | |
|----------------------------------|-------------------------|
| 4 15 12 ♄ or. 34 7 $\frac{1}{2}$ | Dist. per Sext. |
| ♀ occ. 16 59 $\frac{1}{3}$ | 54 16 $\frac{1}{3}$ |
| 51 6 50 | Alt. ♀ 21 $\frac{1}{4}$ |
| 4 19 28 ♄ or. 33 5 | Dist. per Sext. |
| ♀ occ. 18 1 $\frac{3}{4}$ | 54 16 $\frac{1}{4}$ |
| 51 6 $\frac{3}{4}$ | Alt. ♀ 21 |
| 4 22 35 ♄ or. 32 17 | Dist. ♄ & ♀ |
| ♀ occ. 18 49 | 54 16 $\frac{1}{2}$ |
| 51 6 | Alt. ♀ 20 $\frac{5}{8}$ |

Hæ obseruationes erant satis certæ, & tam Armillis æquatorijs quam Sextante comprobari poterint examinarique, si itaque absumperis, iuxta horam 4 $\frac{1}{2}$ distantiam æquatoriam a ♄ P. 51 M. 7 & distantiam veram per Sextantem 54 17 insensibiliter aberrabis.

Postea obseruabatur ♀ a Lucida √ in hunc modum.

| Lucida √ or. | ♀ occ. | Dist. æquat. | Alt. ♀ |
|-----------------------|--------|--------------|------------------------|
| 4 ^H 27' 0" | 32 25 | 19 56 | 52 21 20 $\frac{1}{2}$ |

Postea pro declinatione ♀ accipiebatur.

| | |
|-----------------------------|---------------------|
| 4 31 50 Declin. ♀ vno pinn. | 11 14 |
| Alt. pinn. | 11 14 $\frac{1}{8}$ |

| Luc. √ or. | ♀ occ. | Dist. æquat. | Alt. ♀ |
|------------|---------------------|---------------------|--------------------------------------|
| 4 42 25 | 28 35 | 23 46 $\frac{1}{2}$ | 52 21 $\frac{1}{2}$ 19 50 |
| 4 45 30 | 27 47 $\frac{3}{4}$ | 24 34 $\frac{1}{2}$ | 52 22 $\frac{1}{2}$ 19 40 |
| 4 47 55 | 27 12 $\frac{1}{2}$ | 25 8 | 52 20 $\frac{1}{2}$ 19 $\frac{1}{2}$ |
| 4 50 20 | 26 36 $\frac{1}{2}$ | 25 44 $\frac{1}{2}$ | 52 20 50 19 $\frac{1}{6}$ |
| 4 52 42 | 26 0 $\frac{3}{4}$ | 26 19 $\frac{3}{4}$ | 52 20 $\frac{1}{2}$ 19 |

Collatis singulis pone hora 4 $\frac{1}{2}$ distantiam æquatoriam ♀ & lucidæ √ 52 22 habita ratione refractionis, Declinationem 11 14 $\frac{1}{2}$ Meridionalem.

H. 4 55' Declinatio visa ♀ 11 12 $\frac{1}{2}$, sed refractione facit hoc.

Omnibus præcedentibus obseruationibus ♀ tam per Quadrantem quam per Sextantem & Armillas inuicem collatis satis tuto potes te fundare in restituendo & examinando motu ♀ iuxta maximam digressionem a ☉ vespertinam, Sole in Perigæo ♀ existente, & sunt hæ obseruationes multo exactiores præcedentibus, eo quod hoc vesperti erat apprime serenum, quod præcedentibus aliquot non contigit. Tempora possunt corrigi ex distantia stellarum a Meridie.

DIE 27 DECEMBRIS P. M.

| | |
|--|-------|
| 2 ^H 42' 55" Dist. inter centrum ☉ & ♀ | 46 23 |
|--|-------|

| | |
|---|---------------------|
| Tunc fuit Alt. ☉ 3 45 | |
| 2 47 $\frac{5}{8}$ Repetita dist. ☉ & ♀ | 46 22 $\frac{1}{2}$ |
| Alt. ☉ 3 30 | |

| | | |
|--------------------|--------------------|---------------------|
| 2 50 $\frac{1}{8}$ | Repetita distantia | 46 22 |
| 2 51 $\frac{5}{8}$ | Eadem distantia | 46 21 $\frac{1}{4}$ |
| Alt. ☉ 3 5 | | |

Nota. Hinc poterit locus ☉ indagari & examinari habita ratione refractionis.

In hisce observationibus ☉ fuit in raris nubibus ab occasu oriundis, ut eius umbra exquifite non haberetur.

| | | |
|------------------------|--|----------------------------|
| 2 ^H 55' 29" | Azim. ♀ ante Merid. | 2 10 $\frac{1}{2}$ |
| | per Q. Volub. Alt. ♀ | 23 15 $\frac{1}{2}$ |
| 2 57 31 | per minus | } Azim. ♀ or. 1 38 |
| 2 45 8 | per maius | |
| | | Alt. 23 14 $\frac{5}{8}$ |
| 2 59 38 | per minus | } Azim. or. 1 7 |
| 2 47 4 | per maius | |
| | | Alt. 23 15 $\frac{1}{2}$ |
| 3 3 45 | per minus, ♀ transiit per Merid. habens Altitudinem per Q. Volubilem | 23 15 $\frac{1}{2}$ |
| | Alt. Merid. ♀ per Q. Tich. | 23 16 $\frac{3}{4}$ |
| 3 15 40 | per minus | } Az. ♀ occ. 2 15 |
| | | |
| | | incerta |
| 3 1 41 | per maius | } Alt. 23 12 $\frac{3}{4}$ |
| 3 17 26 | per minus | |
| 3 3 20 | per maius | } Az. ♀ occ. 3 43 |
| | | |
| | | Alt. ♀ 23 12 $\frac{1}{2}$ |
| 3 19 30 | per minus | } Az. ♀ occ. 4 16 |
| 3 5 11 | per maius | |
| | | Alt. ♀ 23 11 $\frac{1}{2}$ |
| 3 21 39 | per minus | } Az. ♀ occ. 4 51 |
| 3 7 16 | per maius | |
| | | Alt. ♀ 23 10 |

| Per minus | Per maius | ♀ occ. |
|-----------|-----------|---------------------|
| 4 2 28 | 3 45 45 | 14 38 $\frac{3}{4}$ |
| 4 4 14 | 3 47 31 | 15 7 |
| 4 5 45 | 3 48 45 | 15 28 $\frac{1}{2}$ |
| 4 8 0 | 3 51 1 | 15 55 |
| 4 9 55 | 3 52 48 | 16 34 $\frac{1}{4}$ |
| 4 12 16 | 3 54 58 | 17 8 $\frac{3}{4}$ |
| 4 13 15 | 3 55 50 | 17 24 |
| 4 14 15 | 3 56 45 | 17 38 |
| 4 15 30 | 3 57 53 | 17 58 |
| 4 16 20 | 3 58 38 | 18 10 |
| 4 17 3 | 3 59 17 | 18 21 |

In sequentibus per minus horologium solummodo tempus acceptum est.

¹ Postea alia manu adscriptum.

| | | |
|---------|------------------|---------------------|
| 4 29 29 | Declin. ♀ aufst. | 10 47 $\frac{1}{2}$ |
| | alt. pinn. | 10 47 $\frac{1}{2}$ |
| | Tunc fuit Alt. ♀ | 20 35 |

| | Lucida Υ or. | ♀ occid. | Dist. æq. | Alt. ♀ |
|---------|---------------------|---------------------|---------------------|-----------|
| 4 44 23 | 26 14 | 25 19 $\frac{1}{4}$ | 51 33 $\frac{1}{4}$ | 20 |
| 4 47 45 | 25 23 | 26 10 $\frac{1}{4}$ | 51 33 | 19 40 |
| 4 50 5 | 24 47 $\frac{3}{4}$ | 26 44 $\frac{5}{8}$ | 51 32 $\frac{1}{2}$ | 19 30 |
| 4 53 10 | 24 1 | 27 32 $\frac{3}{4}$ | 51 33 $\frac{3}{4}$ | 19 20 |
| 4 54 50 | 23 39 | 27 56 | 51 35 | |

Retine 51 34, non fuit satis serenum¹.

DIE 30 DECEMBRIS P. M.

| Minus | Maius | Azim. ♀ | Alt. ♀ |
|-----------------------|------------------------|---------|---------------------|
| 3 ^H 19' 5" | 3 ^H 16' 23" | 2 58 | 24 32 |
| | 3 25 47 | 4 44 | 24 28 $\frac{1}{2}$ |
| 3 27 47 | | 5 15 | 24 26 $\frac{1}{2}$ |
| 3 29 50 | | 5 50 | 24 25 $\frac{1}{2}$ |
| 3 31 34 | | 6 19 | 24 23 $\frac{1}{2}$ |
| 3 33 10 | | 6 44 | 24 21 |
| 3 35 50 | 3 33 18 | 7 26 | 24 19 $\frac{3}{4}$ |
| 3 38 35 | 3 36 13 | 8 11 | 24 16 $\frac{3}{4}$ |
| 3 40 48 | 3 38 30 | 8 46 | 24 12 $\frac{3}{8}$ |
| 3 42 27 | 3 40 13 | 9 13 | 24 11 $\frac{1}{8}$ |
| 3 58 16 | 3 57 0 | 13 30 | 24 46 $\frac{1}{4}$ |

inter nubes.

DIE 31 DECEMBRIS.

| 12 9 17 per Minus. Transiit ☉ per merid. | | |
|--|-------------------------------|--|
| Eodem die P. M. | Azim. ♀ occ. | Alt. ♀ |
| 3 18 10 | 1 1 | 25 0 $\frac{3}{4}$ |
| 3 20 6 | 1 31 $\frac{1}{2}$ | 25 0 |
| 3 21 40 | 1 59 $\frac{1}{2}$ | 24 59 |
| 3 23 28 | 2 26 $\frac{1}{2}$ | 24 58 $\frac{1}{2}$ |
| 3 25 14 | 2 55 | 24 58 |
| 3 26 50 | 3 20 | 24 52 $\frac{2}{3}$ |
| 3 38 55 | Distantia inter centrum ☉ & ♀ | I 45 45 $\frac{1}{2}$ II 45 43 III 45 42 $\frac{1}{2}$ |

Tunc Alt. ☉ erat 1 $\frac{1}{2}$ °. Sed non satis fuit serenum.

| | | |
|--------|--------------------|-------------------|
| 3 45 0 | Decl. ♀ Aufst. vno | 9 4 $\frac{1}{2}$ |
| | altero pinn. | 9 4 |

Distantia ♀ a merid. occ. per Armillas

| | | | |
|---------------------------|-----------------------------------|--|--|
| 3 ^h 52' 27" | 9 18 ³ / ₄ | | |
| 3 54 0 | 9 42 ¹ / ₄ | | |
| 3 54 50 | 9 52 | | |
| 3 55 35 | 10 4 ¹ / ₂ | | |
| 3 56 28 | 10 17 ¹ / ₄ | | |
| 3 57 44 | 10 37 | | |
| 3 58 35 | 10 49 ³ / ₄ | | |
| 3 59 45 | 11 8 ¹ / ₂ | | |
| 4 0 35 | 11 21 ¹ / ₄ | | |
| 5 3 inter ♄ & ♀ per Sext. | 49 58 | | |

| | ♀ occ. | ♄ or. | Dift. æq. | Alt. ♀ |
|---|--------|-------|-----------------------------------|-----------------------------------|
| 5 3 ⁵ / ₈ 27 3 ³ / ₈ 20 9 ² / ₈ | | | 47 13 ¹ / ₈ | 21 0 |
| 5 6 Inter ♄ & ♀ per Sext. | | | | 49 57 ⁵ / ₈ |
| 5 9 53" | | | | 49 58 |

Hinc ex loco ♄ⁿⁱ poterit tempus horologij corrigi, e sequentibus vero obseruationibus ♄ⁿⁱ locus.

| | ♀ occ. | ♄ or. | Dift. æquat. | Alt. ♀ |
|--|--------|-------|-----------------------------------|--------------------------------|
| 5 32 50 34 20 12 52 ¹ / ₂ | | | 47 12 ¹ / ₂ | |
| 5 34 ³ / ₈ 34 48 12 24 | | | 47 12 | |
| 5 37 35 22 ³ / ₄ 11 50 ¹ / ₄ | | | 47 13 | 18 ¹ / ₈ |

Pone itaque dift. æquat. ♀ & ♄ⁿⁱ circa hoc tempus 47 12¹/₂.

| ♀ occ. | Luc. ♀ or. | Dift. æquat. | Alt. ♀ |
|--|-----------------------------------|-----------------------------------|--------------------------------|
| 5 39 40 36 6 12 19 ¹ / ₂ | | 48 25 ¹ / ₂ | 18 ¹ / ₈ |
| 5 44 20 37 11 11 12 | | 48 23 | 17 ⁵ / ₈ |
| 5 46 35 37 44 ³ / ₄ | 10 38 ³ / ₄ | 48 23 ¹ / ₂ | |
| 5 52 25 39 15 9 9 ¹ / ₄ | | 48 24 ¹ / ₄ | 17 20 |
| 5 54 55 39 51 8 33 ¹ / ₂ | | 48 24 ¹ / ₂ | 16 50 |

Pone itaque iuxta horam sextam a meridie distantiam æquatoriam ♀ & luc. ♀ 48 24.

6^h Decl. ♀ vno pinn. 9 1 altero 9 0³/₄

Alt. ♀ tunc erat 16 10.

Hinc poterit verificari longitudo & latitudo ♀, habita tamen ratione refractionis & parallaxeos.

Pro loco ♀ Die 15 Decembris¹.

| | |
|--|--------------------------------------|
| H. 5 0' Dift. æquat. ♀ & luc. ♀ | 62° 14' |
| Afc. Recta lucidæ | 26 1 10 |
| Ergo Afc. R. ♀ | 323 47 ¹ / ₈ |
| Longit. | 20 56 ¹ / ₂ M. |
| Latit. | 1 19 ¹ / ₈ M. |
| Hinc autem ♀ Declin. | 15 49 M. |
| in altit. quasi 15 G. | |
| Resp. Parall. altit. 3' 50", Refr. 3' 0". | |
| Resp. in Long. 0' 27" add., in Lat. 42" add. | |

OBSERVATIONES MERCURIJ.

DIE 21 JANUARIJ.

H. 5 40' Obseruauimus differentiam Afc. R. inter ♄ & Aldeb. 91 35, Declin. ♄ 11 50 Merid. sed erat ♄ valde declinuis vix sesquialtero gradu eleuatus supra Horizontem, vnde refractionem admodum sensibilem ingerebat. Obseruatio hæc non satis certa.

Horologium H. 6 correctum est, & tempus obseruationi ♄ ascriptum bene se habet.

H. 7 15¹/₂' Oculus ♄ per Meridianum.

DIE 22 JANUARIJ.

Obseruauimus ♄ stellam latis bene apparentem instar stellæ ferme secundæ magnitudinis in hunc modum.

H. 5 M. 12 Fuit ipsius declin. per Armillas subterraneas maiores 11 24

H. 5 18' Inter ♄ & caput ♀ dift. æquat. 53 38 Declin. ♄ per easdem Armillas 11 22¹/₂

Alt. tunc erat P. 5¹/₂, sed postea clarius apparuit.

¹ E codice V.

| | Eadem dist. æquat. | Declin. | Alt. |
|--------------------|-----------------------|---------------------|-----------------|
| 5 22 | 53 41 | | |
| 5 26 $\frac{2}{3}$ | 53 40 | 11 21 | 4 $\frac{1}{2}$ |
| 5 30 | 53 40 | 11 20 $\frac{1}{2}$ | 4 0 |
| 5 33 $\frac{1}{2}$ | 53 37 | 11 19 $\frac{1}{2}$ | 3 $\frac{1}{2}$ |
| 5 38 $\frac{2}{3}$ | 53 35 | 11 17 $\frac{1}{4}$ | 3 0 |
| 5 41 | 53 33 $\frac{1}{2}$ | | 2 $\frac{2}{3}$ |
| 5 43 | 53 32 | 11 16 $\frac{1}{4}$ | 2 0 |

Postea non amplius ipsum videre licuit interuenientibus prope Horizontem nubibus. Sed cum heri vespere obseruaretur, paulo adhuc erat decliuor quam in hac vltima obseruatione in altitudine duorum graduum, vnde paulo maiorem ingerebat refractionis varietatem a vero situ. Nam quod interuallo harum obseruationum ipsius distantia æquatoria & declinatio tam dissimilis & successive minor facta sit, effecit nec in motu, nec in obseruatione vacillatio, sed quod ratione refractionis, quo propior fiebat Horizonti altior eleuatus conspiceretur, quam reuera exstitit. Potes itaque absque omni sensibili errore habita ratione refractionum circa Horam 5^{am} vti ipsius distantia æquatoria a capite γ 53 50 & declinatione 11 30 M.

DIE 23 JANUARIJ.

Hoc vespere denuo γ obseruauimus in hunc modum quamuis aliquæ interdum nubes intercurrerant.

| | | |
|------------|-------------------------|---------------------|
| H. 4 M. 57 | fuit ipsius declin. | 10 42 $\frac{1}{2}$ |
| | Dist. æquat. a γ | 85 56 |
| | Altitudo part. | 8 |
| H. 5 8 | Eadem declin. | 10 41 |
| | Dist. æquat. a γ | 40 40 |
| | Alt. γ part. | 7 30 |

Hæ ambæ obseruationes medio-criter se habent, & quamvis obrepusculum & intercurrentes nubes non satis exacte capi potuerit, tamen vix vtroque 2 scrupulorum error ad summum esse poterit.

Deinde a capite γ denuo obseruabatur γ , prout heri vespere in hunc modum.

| | Dist. æquat. γ a capite γ | Declin. | Alt. |
|--------------------|--|---------------------|-----------------|
| 5 ^H 20' | 52 29 | | |
| 5 21 | 52 29 | 10 39 $\frac{1}{4}$ | 5 $\frac{1}{2}$ |
| 5 23 | 52 29 $\frac{1}{2}$ | | 5 $\frac{1}{4}$ |
| 5 25 $\frac{1}{2}$ | 52 28 | 10 38 | 5 |
| 5 30 | 52 27 | 10 37 $\frac{1}{2}$ | 4 $\frac{1}{8}$ |

| | Inter γ & Aldeb. dist. æq. | Declin. | Alt. |
|------|--------------------------------------|---------|-----------------|
| 5 32 | 89 29 $\frac{1}{2}$ | 10 35 | 4 |
| 5 36 | 89 26 | 10 34 | 3 $\frac{2}{3}$ |

Fuerunt præsertim circa finem intercurrentes aliquando nubes, sed quando γ liber erat inter binas nubes cælo sereniori expositus, in hunc antecedentem modum satis accurate obseruatus est. Fuit autem iuxta Copernicum circa limites maximæ elongationis a Sole.

Pro verificando loco γ quo vti sumus in γ obseruando semel vidimus H. 5 M. 44 ipsius declinationem 3 30 $\frac{1}{2}$ B

| | | |
|---|-----------------------|---------------------|
| 5 | 53 γ occident. | 30 39 |
| | Aldeb. orient. | 18 7 $\frac{1}{2}$ |
| | Ergo dist. æquat. | 48 46 $\frac{1}{2}$ |
| | Alt. γ | 32 $\frac{1}{2}$. |

Sed hæc obseruatio fuit subito facta inter recurrentes nubes, nam postea cælum ita est obductum, vt reiterari non potuerit, quare non nimium scrupulose huic erit fidendum, donec exactiores habere licuerit.

H. 5 M. 53 Oculus γ a merid. ad ortum 18^g 8', Respondet H. 5 54 $\frac{1}{2}$
Horologium dedit 5 53

Horologium iusto tardius M. 1 $\frac{1}{2}$ idque a Meridie.

| | | |
|----------------------------|------------------|-----------------|
| Die 21, H. 5 $\frac{3}{4}$ | Afc. R. γ | 331° 30' |
| | Declinatio | 11 50 M. |
| | Altitudo | 1 $\frac{1}{2}$ |

| Ex obseruatione | Calc. Prut. |
|-----------------------|-----------------|
| Long. 29 20 \approx | 29 33 \approx |
| Lat. 0 6 M. | 0 18 M. |
| Die 22 H. 5½ Afc. R. | 332 23 |
| Declinatio | 11 21 |
| Altitudo | 4 |
| Long. 0 19) | 0 40) |
| Lat. 0 3 B. | 0 5 M. |

Die 23, H. 5½ Afc. R. 333 33½
 Decl. Mer. 10 38
 Long. 1 39 X Calc. Prut. 1 44 X
 Lat. 0 18½ B. 0 10 B.

DIE 1 FEBRUARIJ.

Mercurium eo vesperi videre non potuimus, etiam si fuerit satis serenum in occasu. Erant tamen aliquæ nubes in Altitudine 3 vel 4 partium, iuxta Horizontem, quæ forsan eius aspectum impediabant.

DIE 25 OCTOBRIS A. M.

H. 6 M. 7 Vidimus ♀ & obseruabatur ipsius distantia a cauda ♀ 37 39
 Erat autem eius declin. tunc 6 37 M.
 H. 6 M. 10 Repetita distantia ♀ & caudæ ♀ 37 39½

Fuit autem altitudo ♀ tunc quasi 6 graduum, eratque satis magnus ac lucidus, maior ipsa Spica ♀.

Postea denuo obseruauimus ♀ in hunc modum per armillas æquatorias.

H. 6 30' Declin. ♀ 6 39, Alt. ♀ 8½
 Dist. æquat. a corde ♀ 55 13
 6 32 Repetita distantia æquatoria cordis ♀ & ♀ 55 14½
 & declin. ipsius 6 39½
 6 36 Fuit Alt. p. Q. Volub. 8 50
 Deinde obseruauimus ♀ a ♀ in hunc modum.

6 40½ Dist. æquat. ♀ a ♀ 95 6
 Declin. 6 40 M.
 6 40½ Altitudo ♀ 8 57½
 6 42 Repetita distantia æquatoria ♀ & ♀ 95 6½
 6 46½ Declin. ♀ 6 40½

♀ fuit hoc tempore satis apparens & maior videbatur ipso ♂ & stellis primi honoris. Lumen ipsius erat albicans & serenum.

Quod declinatio ipsius in prima obseruatione fuerit 4¹ scrupulis minor, factum est propter refractionem quam habuit in tam decliui Altitu-

dine. Sed et in his vltimis obseruationibus aliquam habuit refractionem, quæ præcauenda venit. Potes itaque ponere ipsius distantiam æquatoriam a ♀ 95º 8' sicque insensibiliter aberrabis, & declinationem 6 43.

H. 7 M. 0 Visa est declinatio ♀ 6 41 sed vix apparebat propter auroram. Alt. ♀ tunc fuit quasi 10½.

DIE 29 OCTOBRIS.

Hora 5 14½ verificabatur Horologium ad oculum ♀ quod saltem 1½ Minuto tardius ibat, isque defectus erat ultra bidui quo corrigebatur.

Postea obseruauimus Spicam propter ♀.

5^H 58' Declinatio Spicæ ♀ 8 52½
 Fuit tunc Alt. Spicæ 7 4
 6 1 Eadem Declin. Spicæ 8 53
 6 3½ Alt. Spicæ 7 50
 6 5 Inter Spicam ♀ & cor ♀ per Sext. Δ 54 0
 Fuit tunc Alt. Spicæ 8 30

| | Dist. ♀ a cauda ♀ | Declin. ♀ | Alt. ♀ |
|-------|-------------------|-----------|--------|
| 6 9½ | 41 24½ | | 4 27 |
| 6 11½ | 41 24½ | | |
| 6 12 | | 8 8½ M. | |
| 6 13 | 41 24½ | | 5 2½ |
| 6 14½ | | 8 3½ | 5½ |
| 6 16 | | 8 3½ | 5½ |
| 6 18 | 41 25½ | | 5 40½ |
| 6 20½ | 41 25½ | | 6 0 |

verior prioribus
 6 21½ 8 4
 6 23 8 4 5 55
 hæc est vera
 6 26½ 41 26½ 6 23
 6 30½ 41 26 6 50
 6 31½ 8 5 7 2½
 6 32½ 8 5½ 7 10

Atque in hac altitudine obseruabatur prius Spica, quando ipsius declinationi defuerunt per refractionem 4 minuta, & distantia a corde ♀ 2 minuta. Ergo tantundem hic in ♀ limitandum, vt locus eius verus & irretractus habeatur.

1 6 in codice C.

6 36 *Repetita distantia*

☿ a cauda ☾ 41 28

Eodem tempore altit. 7 33

6 39 *Repet. dist.* 41 30

Sed his duabus distantijs vix fidentum, quia non erat satis serenum.

6 40½ *Repet. decl.* ☿ 8 6½,
Alt. 8 10

6 41 *Eadem declin.* 8 6½

6 46½ *Dist. ☿ æquat.*

a corde ☾ 59 0½

Declin. ☿ tunc erat 8 7 M.

Alt. 8 53

7 2 *Repetita Dist. æquatoria*

☿ a corde ☾ 59 0¾

Declinatio 8 8½

Alt. ☿ tunc erat 10¾

7 6 *Dist. æquatoria inter* ♃

& ☿ per Armillas 98 57½

Declin. ☿ M., bona 8 7½

Alt. ☿ tunc quasi 11 part.

H. 7 9' non poterat amplius videri ☿ propter auroram, ita vt eßet obseruabilis. Nam semel atque iterum animaduertendo deprehendebatur ipsius distantia æquatoria.

Pro motu ☿ ad Diem 25 & 29 Octobris A. M. iuxta obseruationes superius annotatas.

Die 25 Octobris A. M. H. 6 M. 40.

Distantia æquatoria ♃ & ☿ 95 8

Ascensio R. ♃ 106 40

Ascensio R. ☿ 201 48

Declin. eius 6 43 M.

Resp. Tempus reductum ad vtrasque Ephemerides H. 6 M. 10 A. M.

Ex obseruatione Alphonf. Cypr. Prut. Mæßl.

Long. ☿ 22 39 25 37½ ☾ 24 29½ ☾

Latit. 2 17½ 1 44 S. 0 49 B.

Calculus Alphonf.

in Long. excedit 2° 58'

in Latit. deficit 0 33½

Prutenicus Mæßl.

in Long. excedit 1 50½

in Latit. deficit 1 28½

DIE 29 OCTOBRIS A. M.

Ponatur H. 6 M. 30 A. M. Dist. ☿ a cauda ☾ 41° 28' vt emendetur refractione & Declin. 8° 9' Mer. etiam emendata per refractionem.

Deinde H. 7 2' Dist. æquat.

☿ a corde ☾ 59 2

& Declin. eius tunc aßumatur 8 10 M.

Rurfus H. 7 6' Dist. æq. ♃ a ☿ 98 59

& Declin. ipsius ☿ 8 10 M.

Ad hæc tria tempora Ascensio Recta ☿ inquisita est, & postea locus eius ad Eclipticam vt sequitur.

I. Tempus H. 6 30'. A polus, B. cauda ☾, C ☿.

Latus CA 98° 9' ex decl. Mer. ☿ ad 90 add.

BA 73 6 compl. declin.

caudæ ☾

BC 41 28 Distantia vtriusque

Angulus CAB Differ. Asc. R. 33 25½

Asc. R. caudæ ☾ 171 59½

Ascens. R. ☿ 205 25

Hæc collata cum sequentibus videtur iusto minor.

II. Tempus H. 7 M. 2.

Dist. æquat. ☿ a corde ☾ 59° 2'

Ascensio Recta cordis ☾ 146 35½

Ascens. R. ☿ 205 37

Declin. M. 8 10

Resp. Longitudo ☿ 26 42½ ☾

Latitudo 2 19

Sept.

III. Tempus H. 7 M. 6.

Hic quia ☿ a ♃ obseruabatur, prius Ascensionem R. ♃ inquiremus ex obseruatione eius paulo ante facta.

H. 5½ Dist. ♃ a corde ☾ 38° 50'

Declinatio ♃ B 22 37½

BA 67 22 45

CA 76 2 30

BC 38 50 0

Diff. Asc. R. ♃ a corde ☾, CAB 40 0 21

Asc. R. Reguli 146 35 10

Asc. R. ♃ 106 35

Dist. æquat. ☿ a ♃ 98 59

Asc. R. ☿ 205 34, Decl. 8 10 M. ad III tempus. Ad Horam itaque H. 7 M. 0 accepta est

Asc. R. ☿ 205 35½, Declin. 8 10 M.

Ex obseruatione Alphonf. Prut. Cypr. Mæßl.

Long. ☿ 26 41 ☾ 27 39 ☾ 28 15 ☾

Lat. 2 18½ B. 1 46 B. 1 6½ B.

Alphonf. Cypr. excedit in Long. 0 58
deficit in Lat. 0 32 $\frac{3}{4}$
Pruten. Mæstl. excedit in Long. 1 34
deficit in Lat. 1 12

| D | H | M | Obferuat. | Alphonf. | Pruten. |
|-----------------|----|----|---------------------|---------------------|---------------------|
| 28 | 19 | 0 | 26 41 $\frac{1}{2}$ | 27 39 $\frac{1}{2}$ | 28 15 $\frac{1}{2}$ |
| 24 | 18 | 40 | 22 39 $\frac{1}{2}$ | 25 37 $\frac{1}{2}$ | 24 30 $\frac{1}{2}$ |
| Motus ☿ | | | 4 2 | 2 2 | 3 45 |
| ſpacio dierum 4 | | | | | |

Nota. His obſervationibus ☿ potes ſatis tuto te fundare in reſtituendo ipſius motu, ponendo potius eius locum die 29 Hora 6 $\frac{1}{2}$ Matutina in 26 $\frac{5}{4}$ 42' $\frac{1}{2}$ cum Latitud. Bor. 2 $\frac{5}{4}$ 19', eo quod ea obſervatio ad Regulum facta erat reiterata & certior, quæ ad ♃ tantum ſemel habita in aurora. Quæ vero ad caudam ♄ tum propter ventorum impetum, tum etiam quod non iuxta ductum Eclipticæ caderet, ea diſtancia minus rata cenſebitur.

Fuit autem hoc die ☿ circa maximæ remotionis a Sole limites, & poſt hac illi approximari cogitur.

DIE 31 OCTOBRIS A. M.

H. 4 $\frac{1}{2}$ verificabatur Horologium ad oculum ☿ quod 3 $\frac{1}{2}$ M. ſpacio duorum dierum, poſtquam corrigebatur proxime, tardius ibat.

N. B. Diſtancia oculi ☿ a Meridiano ſemel tantum accipiebatur. Conſule igitur ſequentes fixarum obſervationes a Meridie, & de tempore non dubitabis.

Poſtea Spicam obſervauimus per Armillas æquatorias propter ☿.

| | Declin. Spicæ Merid. | Diſt. æquat. a corde ♄ | Alt. Spicæ per ☿. Volub. |
|--------------------|----------------------------|------------------------------|--------------------------------|
| 5 ^H 44' | 8 52 $\frac{1}{4}$ | 49 23 $\frac{1}{2}$ | 6 42 $\frac{1}{2}$ |

Sed poſtea exactius obſervabatur.

| | Decl. | ☿ | Auſtr. | Fuit tunc |
|--------------------|------------------------|---------------------|--------------------|-----------|
| 5 48 | 8 52 $\frac{1}{2}$ | 49 19 $\frac{1}{2}$ | 7 11 | |
| 5 51 $\frac{1}{2}$ | 8 52 $\frac{2}{3}$ | 49 19 | 7 36 $\frac{1}{4}$ | |
| 5 54 $\frac{3}{4}$ | 8 53 | 49 19 | 8 2 $\frac{1}{2}$ | |
| 6 0 | 8 53 $\frac{1}{2}$ | 49 19 $\frac{1}{2}$ | 8 40 | |
| 6 12 | Decl. ☿ 8 | 59 | Auſtr. | Fuit tunc |
| | Alt. ☿ 4 $\frac{1}{2}$ | ēν | πλάττει. | |

Poſtea interuenerunt nubes, vt amplius ☿ obſeruare non licuerit, ſed ex hac declinatione prius ob refractiōnem limitata & latitudine ipſius ex prioribus obſervationibus huc proportionaliter transferenda poterit ipſius Longitudo & Latitudo indagari, etſi non ſatis exacto modo, ob Latitudinem forte non ſatis ſcrupuloſe atque hoc loco opus eſt cognitam, erit tamen mediocriter bona ratiocinatio. Latitudo autem ipſius aſumi poterit 2 $\frac{5}{4}$ 19' Bor. & declinatio verificata ob refract. addendo Minuta 7, vt ſit declinatio vera 9 $\frac{5}{4}$ 6'.

Azim. ♃ a Meridie ad occ. 53 24 $\frac{1}{2}$
H. 6 54 $\frac{3}{4}$ Alt. ♃

in aſignato Azim. 44 8

Diſtabat tunc ♃ a Merid.

verſus occaſ. 43 7

idque pro verificatione Horologij.

7 3' 25" Azim. ♃ occid. 55 47 $\frac{1}{2}$

Alt. ♃ 43 3

Diſt. eodem momento

a Merid. 45 22

7 7 32 Rurſus ♃ in Azim. 56 53

Alt. ♃ 42 30

Diſt. a Meridiano 46 22 $\frac{1}{2}$

Atque ex his poterit verificari Horologium.

DIE 1 NOUEMBRIS A. M.

H. 4 $\frac{1}{2}$ A. M. Horologium verificatum eſt, quod vnus diej ſpacio Minutis 2 fere iuſto citius ibat. Hæc correctio Horologij mediocris erat.

Deinde Spicam obſervauimus ob refractiōnem eius & per conſequens ☿ inueſtigandam.

| | Alt. Spicæ ♄ | Decl. Spicæ ♄ | Spica aliquoties in diſſe- rentia aſcenſio- nali a corde ♄ |
|--------------------|--------------------|--------------------|--|
| 5 ^H 20' | 4 17 | 8 49 $\frac{1}{2}$ | |
| 5 23 | 4 32 | 8 49 $\frac{2}{3}$ | |
| 5 27 | 5 2 $\frac{1}{2}$ | 8 50 | 49 17 |
| 5 30 | 5 18 | 8 50 $\frac{1}{4}$ | 49 17 |
| 5 33 $\frac{1}{2}$ | 5 51 $\frac{1}{2}$ | 8 50 $\frac{1}{2}$ | 49 16 $\frac{1}{2}$ |
| 5 37 $\frac{1}{2}$ | 6 22 | 8 50 $\frac{3}{4}$ | 49 17 |

Vera Spicæ Decl. 8 57½. Patet itaque quod in Alt. 4¼ habuerit refract. 8'

in Alt. 4½ habuerit refract. 7½

in Alt. 5 part. refract. 7½

in Alt. 6 part. refract. 7 0

5^H 42' Distabat Spica a corde Ω 53 57

Fuit tunc Altit. Spicæ 6 42½

5 45 Rursus dist. a corde Ω 53 57

Altit. Spicæ tunc 7 16½

5 48 Repetita dist. 53 57½

Fuit tunc Alt. Spicæ 7 40

Deinde rursus obseruauimus Spicam in distantia æquatoria a corde Ω & declinatione & altitudine pro refractione ulterius perscrutanda.

| Tempus | Alt. Spicæ | Declin. | Diff. Asc. R. a corde Ω |
|--------|------------|---------|-------------------------|
| 5 52½ | 8 11¼ | 8 53½ | 49 17¾ |
| 5 56 | 8 35 | 8 53 | 49 18¼ |
| 5 58¾ | 8 55 | 8 53½ | 49 19 |
| | | bona | non tuta |
| 6 2¼ | 9 13½ | 8 53½ | 49 18¾ |

Deinde ☿ obseruauimus in hunc modum.

| Tempus | Alt. ☿ | Declin. M. | Diff. æquat. a corde Ω |
|--------|--------|------------|------------------------|
| 6 7½ | 3 10¾ | 9 26½ | 62 22½ |
| 6 9¾ | 3 42½ | 9 27½ | 62 23½ |
| 6 13¼ | 4 0½ | 9 28½ | 62 25 |
| 6 17½ | 4 15 | 9 28½ | 62 25¾ med. |
| 6 19½ | 4 30 | 9 30 | 62 26½ incert. |
| 6 22½ | 4 53½ | 9 30 | 62 26 bona |
| 6 27 | 5 23¼ | 9 30 | 62 27 clara |
| 6 31 | 6 0 | 9 31 | 62 27½ |
| 6 34½ | 6 18½ | 9 31 | 62 27¾ |
| 6 39 | 6 55 | 9 31 | distabat |

☿ a Spica 13 1¾

6 40 Repet. eadem dist. 13 1¼

6 45 Declinatio Spicæ 8 56

6 50 Repetita Decl. 8 54

Diff. æquat. Spicæ

a corde Ω 49 20

Sed hæ obseruationes ad Spicam fuere saltem εν πλάτει propter lucem diej.

H. 5 M. 57 Inter ♃ & ☿ distantia æquatoria 112 31½, Declin. 9 34, fuit tunc Alt. ☿ 8½.

Deinde pro verificando tempore.

7^H 4¼^M ♃ a Meridie 46 35½

7 5½ versus occasum 46 50

7 6 47 0

7 8 Fuit Decl. ♃ vno pin. 22 37

Alt. pinnacid. 22 37

Fuit autem tunc Alt. ♃ 41 47

Pone Hora 6½ declinationem ☿ 9 37½ & distantiam æquatoriam a Regulo 62 30 & in nullo Minuto aberrabis. Limitaui enim ipsius refractionem quemadmodum Spica ostendit. Hinc locum ipsius inquire & cum distantia a Spica H. 6 M 40 quæ erat bis sumpta 13 1½ confer. Idem fiat cum loco ♃ ad Horam 6 M. 57 ponendo illic declinationem ☿ 9 38 & distantiam æquatoriam a ♃ 102 33 restitutis & hic ipsius utrobique refractionibus. Locus autem ♃ inquire potest ex distantia ipsius a corde Ω, accepta H. 6¼ 38 53 & declinatione 22 37 & conferri cum antecedente die.

In Meridie Horologium 4 Minutis tardius mouebatur idque ab Hora 4½ Matutina, quando mediocriter corrigebatur.

DIE 2 NOUEMBRIS A. M.

Paulo ante Horam 4 matutinam errorem horologij ad Solem in Meridie antecedente correcti fere nullum ex distantia oculi ☿ a Meridiano deprehendimus.

Obseruatio Spicæ ♄ propter ☿ vt refractione inde habeatur.

| Tempus | Alt. | Declin. | Diff. æquat. a corde Ω |
|--------------------|-------|---------|------------------------|
| 5 ^H 3½' | 2 8¼ | 8 42 | Non obseruabatur |
| 5 12 | 3 14 | 8 46 | 49 15 |
| 5 16 | 3 42 | 8 47½ | 49 15 |
| 5 18½ | 4 5¾ | 8 48 | 49 15 |
| 5 21 | 4 20 | 8 48½ | 49 15½ bona |
| 5 24 | 4 45½ | 8 49 | 49 15½ |
| 5 28 | 5 16½ | 8 50 | 49 16 |
| 5 35 | 6 9 | 8 50½ | 49 16½ |
| 5 39 | 6 37 | 8 51¼ | 49 17 |
| 5 42 | 7 0 | 8 51¾ | 49 17½ |
| 5 52 | 8 11 | 8 53 | 49 18 |

| Tempus | Alt. | Declin. | Dist. æquat. a corde \odot |
|--------|--------|---------|---------------------------------|
| 5 54 | 8 27 | 8 53 | 49 18 |
| 6 11 | 10 30 | 8 54 | 49 19 |
| 6 14½ | 10 54 | 8 54½ | 49 19 |
| 6 47 | 14 27½ | 8 55 | 49 19½ |
| 6 50½ | 14 50 | 8 55 | 49 19½ |

Postea non amplius obseruabatur Spica ob lumen auroræ eam attenuantem nobis. Verum hinc satis certo colligi possunt ipsius refractiones ab altitudine duorum graduum vsque in refractionem altitudinis 15 part. Nam vera & irrefracta Spicæ declinatio hoc tempore est 8 57½. Vera & irrefracta distantia æquatoria 49 19½ quæ prope 15 grad. altitudinis irrefracte apparet.

Hinc collatione facta manifestantur Spicæ refractiones, quæ in sequentibus & antecedentibus φ obseruationibus applicari poterint.

Obseruationes φ .

H. 5 M. 59 Alt. φ 0½^g, Declin. 9 50 $\epsilon\nu$ $\pi\lambda\acute{\alpha}\tau\epsilon\iota$ propter vicinitatem Horizontis.

Exactiores obseruationes φ rij.

| Tempus | Alt. | Declin. | Dist. æquat. a corde \odot |
|-------------------|-------|---------|---------------------------------|
| 6 ^H 2¼ | 1 30 | 9 50½ | 63 30 incerta |
| 6 5 | 1 45 | 9 52 | 63 35 melior |
| 6 8¼ | 2 6 | 9 54½ | 63 36 |
| 6 18 | 3 19 | 9 57 | 63 39 |
| 6 20½ | 3 37 | 9 59 | 63 39 |
| 6 23 | 3 55½ | 10 0 | 63 40 |
| 6 53½ | 7 39 | 10 4½ | 63 44 |
| 6 56 | 7 53 | 10 5 | 63 45 |
| 6 59½ | 8 11 | 10 6 | 63 46 |

Postea non amplius obseruabatur φ , lumine auroræ ipsum attenuante. Verum hæ obseruationes sunt satis certæ, quibus tuto te fundare possis.

Ponatur autem iuxta ipsam horam 7 matutinam ipsius declinatio 10 10½ & distantia æquatoria a corde \odot 63 47 & infallibiliter obtinebis eius Long. & Latit. quam conferre potes cum distantia a Spica habita H. 6½ quæ erat 14 19 habita ratione promotionis intermediae ipsius φ .

7^H 6½ Distabat φ a Merid. occid.

| | | |
|------|-------------------------|--------|
| | | 47 16½ |
| 7 7¼ | Eadem remotio φ | 47 36 |
| 7 8½ | Eadem remotio | 47 46 |

His vttere pro Horologio verificando.
Inter Spicam & φ per Sextantem Trig.

| | Distantia | Alt. φ | Alt. Spicæ |
|-------|-----------|----------------|------------|
| 6 33 | 14 19¾ | 5 20 | 13 0 |
| 6 36 | 14 19½ | 5 40 | 13 20 |
| 6 39 | 14 19 | 5 59 | 13 40 |
| 6 41½ | 14 18¾ | 6 18 | 13 57½ |

Pone itaque iuxta horam 6½ distantiam φ a Spica M 14 19 infallibiliter.

Horologium in Meridie saltem ¼ Minuti tardius ibat, quod erat insensibile.

DIE 4 NOUEMBRIS A. M.

Refractionis Spicæ obseruabatur in simili altitudine eadem pene, quanta est prius inuenta.

Nam in altitudine 7 partium habuit declinationem Spica 8^g 51½.

Postea φ obseruauimus hoc modo.

| | H. M. | Altitudo | Declinatio | Dist. æquat. a corde \odot |
|--------|-------|-----------|------------|---------------------------------|
| | 6 11 | quasi 1g. | 10 57½ | 66 12½ |
| | 6 14 | 1 27 | 10 58½ | 66 14 |
| | 6 17 | 1 52½ | 10 59 | 66 14 |
| | 6 19½ | 2 7 | 11 2½ | 66 14½ |
| | 6 22½ | 2 32½ | 11 3 | 66 15½ |
| | 6 25 | 2 50 | 11 4½ | 66 16¼ |
| | 6 27½ | 3 4 | 11 5½ | 66 16½ |
| obsc. | 6 32½ | 3 39 | 11 6 | 66 17½ |
| melior | 6 34½ | 3 55 | 11 7 | 66 18 |
| obsc. | 6 36½ | 4 12 | 11 7½ | 66 20 |
| obsc. | 6 40 | 4 40 | 11 8¼ | 66 22 |
| | 6 43½ | 5 0 | 11 8½ | 66 22 |
| | 6 49 | 5 32 | 11 9 | 66 22½ |
| | 6 52 | 6 3 | 11 9½ | 66 23 |
| | 6 54 | 6 18½ | 11 9¾ | 66 24 |
| | 6 57 | 6 30 | 11 10 | 66 26 |

N. B. Tempora assignata sunt verificata. Pone ad Horam 7

Declin. φ 11 16½

Differ. Ascensionalem

a corde \odot 66 26½

Hincque inquiretur eius locus.

DIE 7 NOUEMBRIS A. M.

N. B. Sequentia tempora obseruati-
oni ☿ assignata sunt verificata¹.

| Tempus | Altitudo | Declinatio | Dist. æquat. a corde ☿ |
|--------------------|----------|---------------------|-----------------------------|
| 6 41 | 3 10 | 12 48 | non obser- dubia uabatur |
| 6 48 | 3 24 | 12 49 | 70 36 $\frac{1}{2}$ |
| 6 50 | 3 47 | 12 49 $\frac{1}{2}$ | 70 35 |
| 6 54 | 4 13 | 12 49 | 70 34 $\frac{1}{4}$ |
| 6 56 | 4 50 | 12 50 $\frac{1}{2}$ | 70 34 $\frac{1}{2}$ |
| 6 59 $\frac{1}{2}$ | 5 8 | 12 51 | 70 36 |
| 7 2 | 5 22 | 12 52 | 70 34 $\frac{1}{2}$ |
| 7 4 $\frac{1}{2}$ | 5 45 | 12 52 $\frac{1}{2}$ | 70 35 $\frac{1}{2}$ |
| 7 8 | 5 58 | 12 52 $\frac{1}{2}$ | 70 35 $\frac{1}{2}$ |
| 7 10 | 6 10 | 12 53 | 70 35 $\frac{1}{2}$ |

Postea non amplius obseruabatur
☿ eo quod lumen auroræ ipsum visui
attenuaret. Potes autem iuxta Hor-
am 7 10' assumere ipsius declina-
tionem veram 13 0 & differentiam
æquatoriam a Regulo 70 40 & non
sensibiliter errabis.

DIE 8 NOUEMBRIS A. M.

Deinde Spicam ♀ aliquoties in
declinatione & distantia æquatoria
obseruauimus, idque obrefractionem
eius, quæ ☿ applicanda venit, denuo
inuestigandam. Nam Armillæ maio-
res non satis exacte prius fuerant in
libella.

| Tempus correctum | Altitudo | Declinatio | Dist. æquat. a corde ☿ |
|--------------------------------|---------------------|--------------------|---------------------------|
| 5 ^H 48 ^M | 10 30 $\frac{1}{2}$ | 8 54 $\frac{3}{5}$ | 49 19 |
| 5 53 | 11 8 | 8 55 | 49 19 $\frac{1}{5}$ |
| 5 56 | 11 27 $\frac{3}{4}$ | 8 55 $\frac{1}{5}$ | 49 19 |

Patet itaque quod insensibilis sit
differentia inter refractionem decli-
nationis, quæ fuit priusquam paululo
melius ad libellam rectificarentur ar-
millæ, & si qua ea fuit, erat saltem $\frac{1}{2}$
scrupuli, ita vt refractione in semise
scrupuli minor fieret quam antea, id
quod cauere poterit in sequentibus
☿ obseruationibus, in antecedenti-
bus non est opus.

¹ Cf. supra p. 56 inter obseruationes Jovis.

Postea obseruabatur ☿ in hunc qui
sequitur modum.

| Tempus corr. | Altit. ☿ | Declin. ☿ | Dist. æquat. a corde ☿ |
|--------------------|-------------|---------------------|-----------------------------|
| 6 45 | 2 42 | 13 20 | 71 56 |
| 6 48 | 3 1 | 13 21 | 71 57 |
| 6 50 | 3 15 | 13 21 $\frac{1}{2}$ | 71 57 $\frac{1}{2}$ medioc. |
| 6 52 | 3 26 | 13 22 $\frac{1}{2}$ | 71 58 |
| 6 54 | 3 53 | 13 23 $\frac{1}{2}$ | 71 58 $\frac{1}{4}$ |
| 6 56 $\frac{1}{2}$ | 4 0 | 13 24 | 71 58 $\frac{1}{2}$ |
| 6 59 | 4 20 | 13 25 | 72 0 medioc. |
| 7 1 | 4 40 | 13 25 $\frac{3}{4}$ | 72 0 $\frac{1}{2}$ |
| 7 3 | 4 55 | 13 26 $\frac{1}{4}$ | 72 0 $\frac{1}{4}$ |
| 7 5 | 5 15 | 13 27 | 72 0 $\frac{1}{2}$ |
| 7 10 | 5 35 | 13 27 $\frac{1}{2}$ | 72 4 incerta |
| 7 12 | 5 45 | 13 28 | 72 1 $\frac{3}{4}$ melior |
| 7 15 | 6 10 | 13 28 | non poterat accipi |

Postea non amplius videbatur ☿ ob
lumen auroræ ipsum aspectui atten-
nuantem. Pone iuxta Horam 7 M. 15
declinationem ipsius ☿ veram 13 35
& diff. asc. 72 5.

DIE 10 NOUEMBRIS A. M.

Horologium verificabatur Hora 6
ad cor ☿.

Obseruatio Spicæ ♀

| | Altitudo | Declinatio | Dist. æquat. a corde ☿ |
|-----------------------|----------|--------------------|---------------------------|
| 6 ^H 37'40" | 16 30 | 8 56 | 49 20 |
| 6 42 45 | 17 9 | 8 56 $\frac{1}{5}$ | 49 20 |

Hinc poterint verificari declinati-
ones & distantiae æquatoriae ob re-
fractionem.

Postea adhuc obseruabatur ☿ in
hunc modum.

| Tempus | Altitudo | Declinatio | Dist. æquat. a corde ☿ |
|---------|--------------------|---------------------|---------------------------|
| 6 48 0 | 1 48 | 14 25 | 74 46 $\frac{1}{2}$ |
| 6 50 40 | 2 1 | 14 27 | 74 47 $\frac{1}{2}$ |
| 6 52 15 | 2 12 | 14 28 | 74 49 |
| 6 53 45 | 2 20 | 14 29 | 74 50 |
| 6 55 30 | 2 31 $\frac{1}{2}$ | 14 29 $\frac{1}{2}$ | 74 50 $\frac{1}{2}$ |
| 6 59 0 | 3 0 | 14 30 $\frac{1}{2}$ | 74 50 $\frac{1}{2}$ |

| Tempus | Alti- tudo | Decli- natio | Dist. æquat. a corde \odot |
|--------|---------------|---------------------|---------------------------------|
| 7 1 20 | 3 13 | 14 32 | 74 51 $\frac{1}{2}$ melior |
| 7 3 10 | 3 25 | 14 31 $\frac{1}{2}$ | 74 50 |
| 7 5 0 | 3 34 | 14 32 $\frac{1}{4}$ | 74 52 bona |
| 7 6 20 | 3 45 | 14 32 $\frac{1}{2}$ | 74 53 |
| 7 8 0 | 4 10 | 14 33 | 74 52 $\frac{1}{2}$ |
| 7 11 0 | 4 30 | 14 34 | 74 55 |

Pone itaque ad Horam 7 M. 8 Declinationem 14 42 $\frac{1}{2}$ & Dist. æquatoriam 74 50 & habebis locum γ .

DIE 11 NOUEMBRIS A. M.

Denuo obseruabatur Spica \mathbb{M} propter refractionem inquirendam.

| Tempus | Altitudo | Declinatio | Dist. æquat. a corde \odot |
|-------------------------------|---------------------|--------------------|---------------------------------|
| 5 ^H 2 ^M | 6 32 $\frac{1}{2}$ | 8 51 | 49 16 |
| 5 5 | 6 52 $\frac{1}{2}$ | 8 51 $\frac{1}{2}$ | 49 16 |
| 5 7 $\frac{1}{2}$ | 7 12 | 8 51 $\frac{1}{2}$ | 49 16 $\frac{1}{2}$ |
| 5 33 | 10 11 | 8 54 | 49 19 |
| 5 36 | 10 33 $\frac{1}{2}$ | 8 54 | 49 18 $\frac{1}{2}$ bona |
| 5 39 | 10 54 | 8 54 | 49 18 bona |

Spica etiam obseruabatur a Corde, instrumento fixato in hunc modum.

| Spica or. | Cor \odot or. | Dist. æquat. | Alt. Spicæ |
|--------------------|---------------------|--------------------|---------------------|
| 5 23 | 58 43 $\frac{1}{4}$ | 9 26 $\frac{1}{4}$ | 49 17 |
| 5 26 $\frac{1}{2}$ | 57 59 $\frac{3}{4}$ | 8 44 | 49 15 $\frac{1}{4}$ |
| 5 29 $\frac{1}{2}$ | 57 18 $\frac{1}{4}$ | 8 1 $\frac{3}{4}$ | 49 16 $\frac{1}{2}$ |

Repetitæ obseruationes Spicæ a corde \odot instrumento soluto & fixato, vt collatio fieri possit.

| Declinatio | Dist. æquat. | Altitudo |
|--------------------|--------------------|---------------------|
| 6 29 $\frac{1}{2}$ | 8 55 $\frac{1}{4}$ | 49 20 |
| 6 33 | 8 55 $\frac{2}{3}$ | 49 19 $\frac{1}{2}$ |
| 6 35 | 8 55 $\frac{2}{3}$ | 49 19 $\frac{1}{2}$ |

Postea fixato instrumento obseruabatur eadem distantia æquatoria in hunc modum.

| Spica or. | Cor \odot occ. | Dist. æquat. | Alt. Spicæ |
|--------------------|---------------------|--------------------|---------------------|
| 6 37 $\frac{1}{2}$ | 40 20 | 8 58 | 49 18 |
| 6 38 $\frac{1}{2}$ | 40 0 $\frac{1}{2}$ | 9 16 | 49 16 $\frac{1}{2}$ |
| 6 40 | 39 38 $\frac{1}{8}$ | 9 38 $\frac{1}{4}$ | 49 16 $\frac{1}{2}$ |
| 6 42 | 39 8 $\frac{1}{8}$ | 10 8 | 49 16 $\frac{1}{8}$ |

Patet itaque quod tribus scrupulis differat instrumentum solutum & fixum.

Postea obseruabatur γ in hunc modum.

| Tempus | Altitudo | Declinatio | Dist. æquat. a corde \odot |
|--------------------|-----------------------|--------------------|---------------------------------|
| 6 11 | 2 $\frac{1}{2}$ quasi | 15 4 $\frac{1}{4}$ | 76 22 |
| 6 14 | 3 quasi | 15 6 | 76 25 |
| 6 16 $\frac{1}{2}$ | 3 1 | 15 6 $\frac{1}{2}$ | 76 24 bona |
| 6 18 | 3 16 | 15 7 $\frac{1}{2}$ | 76 25 $\frac{1}{4}$ |
| 6 20 $\frac{1}{2}$ | 3 30 | 15 8 | 76 26 |

Pone hora 6 $\frac{1}{2}$ declinationem ipsius γ 15 20 & distantiam æquatoriam a corde \odot partium 76 scrup. 31, & ipsius locum satis scrupulose obtinebis.

Horologium in Meridie celerius ibat M. 1 55" qui error saltem est ab hora matutina 3 $\frac{1}{2}$.

TABELLA REFRACTIONUM

Declinationis & Ascensionis Rectæ Spicæ \mathbb{M} , posita Declinatione eius vera Mer. 8° 57 $\frac{1}{2}'$ & Differentia Asc. R. a corde \odot 49° 19 $\frac{1}{2}'$ ex obseruationibus supra pro γ mense Octobri & Nouembri factis.

| Altitudo G. | Declinationis Refractio M. Sec. | Ascensionis R. Refract. M. Sec. |
|----------------|---------------------------------------|---------------------------------------|
| 1 | 22 0 | 7 0 |
| 2 | 15 30 | 5 0 |
| 3 | 11 40 | 4 30 |
| 4 | 9 20 | 4 0 |
| 5 | 7 40 | 3 20 |
| 6 | 6 50 | 2 50 |
| 7 | 5 45 | 2 10 |
| 8 | 4 40 | 1 40 |
| 9 | 4 0 | 1 15 |
| 10 | 3 20 | 1 0 |
| 11 | 3 0 | 0 50 |
| 12 | 2 50 | 0 35 |
| 13 | 2 40 | 0 20 |
| 14 | 2 35 | 0 10 |
| 15 | 2 30 | 0 0 |

Inquisitio

Longitudinis & Latitudinis γ ad singulos dies, quibus in fine mensis Octobris & initio Nouembris superius obseruabatur, habita Declinationis eius & Asc.^{is} R. refractionum ratione.

DIE 25 OCTOBRIS A. M.

| | | |
|--|-----|--------------------------|
| H. 6 40' Dist. æquat. ♄ & ☿ | 95 | 6 |
| Adde pro refractione | | $1\frac{1}{3}$ |
| Vera distant. æquat. | 95 | $7\frac{1}{3}$ |
| Afcen. R. ♄ | 106 | 40 |
| Afcen. R. ☿ | 201 | $47\frac{1}{3}$ |
| Declinatio emendata adiectis 5 ^M | 6 | 44 |
| | | Auft. |
| Resp. Longitudo ☿ | 22 | $38\frac{1}{2}$ Ω |
| Latitudo | 2 | 16 |
| | | Bor. |

Eodem Die

| | | |
|---------------------------------------|-----|--------------------------|
| H. 6 30' Dist. æquat. | | |
| a corde Ω | 55 | 13 |
| Adde pro refractione | | $1\frac{1}{2}$ |
| Vera diff. Afc. R. ☿ a corde Ω | 55 | $14\frac{1}{2}$ |
| Afcensio R. cordis Ω | 146 | $35\frac{5}{8}$ |
| Afcensio R. ☿ | 201 | $49\frac{3}{8}$ |
| Decl. M., vt prius, | 6 | 44 |
| Hinc Longitudo ☿ | 22 | $41\frac{1}{2}$ Ω |
| Latitudo | 2 | $17\frac{1}{4}$ |
| | | Bor. |

DIE 29 OCTOBRIS A. M.

| | | |
|--------------------------|-----|--------------------------|
| H. 7 M. 0 Dist. æquat. ☿ | | |
| a corde Ω | 59 | $0\frac{3}{4}$ |
| Refraction addit | | $0\frac{3}{4}$ |
| Vera dist. æquatoria | 59 | $1\frac{1}{2}$ |
| Declin. obseruata | 8 | 8 |
| adde | | 3 |
| Declin. vera | 8 | 11 |
| | | Mer. |
| Afcen. R. vera | 205 | $36\frac{2}{3}$ |
| Resp. Longitudo ☿ | 26 | $42\frac{1}{2}$ Ω |
| Latitudo | 2 | 18 B. |

DIE 31 OCTOBRIS A. M.

| | | |
|------------------------------|----|--------------------|
| H. 6 10' Declin. ☿ obseruata | 8 | 59 |
| | | Mer. |
| Adde pro refract. | | 9 |
| Vera declin. | 9 | 8 |
| | | Mer. |
| Latitudo proportion. | 2 | $13\frac{1}{2}$ B. |
| Hinc Longitudo inquisita. | | |
| BC Dist. polorum | 23 | 31 |
| AC ex declin. auf. | 99 | 8 |
| AB complem. latit. | 87 | $46\frac{1}{2}$ |

| | | |
|--------------------------------|-----|--------------------------|
| Hinc ABC angulus, ☿ a Ω | 119 | $10\frac{1}{6}$ |
| Resp. Longitudo ☿ | | |
| quæfita | 29 | $10\frac{1}{6}$ Ω |
| Latit. proportion. | 2 | $13\frac{1}{2}$ B. |

DIE 1 NOUEMBRIS A. M.

| | | |
|-------------------------|-----|--------------------|
| H. 6 30' Dist. æquat. ☿ | | |
| a corde Ω | 62 | $27\frac{1}{2}$ |
| adde | | $2\frac{3}{8}$ |
| Vera distantia æquat. | 62 | $30\frac{1}{2}$ |
| Declin. obseruata ☿ | 9 | $30\frac{1}{2}$ |
| | | Mer. |
| adde | | $6\frac{3}{8}$ |
| Vera declin. ☿ | 9 | $37\frac{1}{2}$ |
| | | Mer. |
| Vera Afc. R. | 209 | $5\frac{1}{2}$ |
| Resp. Longitudo ☿ | 0 | 26 η |
| Latitudo | 2 | $10\frac{1}{2}$ B. |
| Die eodem | | |
| H. 6 40' Dist. inter ☿ | | |
| & Spicam | 13 | $1\frac{1}{2}$ |
| | | per Sext. |
| Declin. ☿ | 9 | 31 |
| | | Mer. |
| adde | | 5 |
| Declin. vera | 9 | 36 M. |

| | | | |
|------------------------------------|----------|-----|----------------|
| A polus auf. | Latus AC | 80 | 24 |
| B Spica | AB | 81 | $2\frac{1}{2}$ |
| C ☿ | BC | 13 | $1\frac{1}{2}$ |
| Hinc Ang. CAB, diff. Afc. R. | 13 | 10 | 58 |
| Afc. R. Spicæ | | 195 | 54 |
| Afc. R. ☿ quæfita | | 209 | 5 |
| quæ fere cum inuenta Afcensione R. | | | |
| a corde Ω consentit. | | | |

DIE 2 NOUEMBRIS A. M.

| | | |
|-----------------------------------|-----|-------|
| H. 6 39' Dist. inter ♀ & Spicam ♀ | | |
| BC per Sextantem | 14 | 19 |
| Decl. ♀ vera | 10 | 10 M. |
| BA Complem. Decl. | | |
| Spicæ | 81 | 2½ |
| AC Complem. Decl. ♀ | 79 | 50 |
| CAB Angulus | | |
| diff. Asc. R. | 14 | 28 |
| Asc. R. Spicæ | 195 | 54 |
| Asc. R. ♀ | 210 | 22 |
| Resp. Longitudo ♀ | 1 | 48 M |
| Latitudo | 2 | 6 B. |

Eodem Die

| | | |
|------|-------------------|------------------------|
| H. 7 | 0' Dist. æquat. ♀ | |
| | a corde Ω | 63 45 $\frac{1}{2}$ |
| | adde | 1 $\frac{1}{2}$ |
| | Dist. æquat. vera | 63 47 |
| | Declinatio ♀ | 10 5 $\frac{1}{2}$ |
| | adde | 4 $\frac{2}{3}$ |
| | Declin. ♀ vera | 10 10 $\frac{1}{3}$ M. |
| | Afcenf. R. vera | 210 22 $\frac{1}{3}$ |
| | Resp. Longitudo ♀ | 1 48 $\frac{1}{4}$ M |
| | Latitudo | 2 5 $\frac{3}{4}$ B. |

DIE 4 NOUEMBRIS A. M.

| | | |
|------|---------------------|------------------------|
| H. 6 | 57' Dist. æquat. ♀ | |
| | a corde Ω | 66 26 $\frac{1}{2}$ |
| | vera | |
| | Declin. obseruata ♀ | 11 10 |
| | adde | 6 $\frac{1}{2}$ |
| | Declin. vera | 11 16 $\frac{1}{2}$ M. |
| | Afcenf. R. vera ♀ | 213 1 $\frac{2}{3}$ |
| | Resp. Longitudo ♀ | 4 37 $\frac{2}{3}$ M |
| | Latitudo | 1 56 $\frac{1}{2}$ B. |

DIE 7 NOUEMBRIS A. M.

| | | |
|------|--------------------|----------------------|
| H. 7 | 10' Dist. æquat. ♀ | |
| | a corde Ω | 70 40 |
| | vera | |
| | Declin. ♀ vera | 13 0 M. |
| | Afcenfio Recta | 217 15 $\frac{1}{8}$ |
| | Resp. Longitudo ♀ | 9 6 $\frac{1}{2}$ M |
| | Latitudo | 1 40 B. |

DIE 8 NOUEMBRIS A. M.

| | | |
|------|-----------------------|-----------------------|
| H. 7 | 15' Dist. æquat. ♀ | |
| | a corde Ω obf. | 72 2 |
| | Adde pro refr. | 3 |
| | Vera distantia | 72 5 |
| | Declin. ♀ M. | 13 28 |
| | adde | 7 |
| | Vera Declin. ♀ | 13 35 M. |
| | Vera Afc. R. | 218 40 $\frac{1}{8}$ |
| | Resp. Longitudo ♀ | 10 36 M |
| | Latitudo | 1 32 $\frac{2}{3}$ B. |

DIE 10 NOUEMBRIS A. M.

| | | |
|------|-----------------------|---------------------------|
| H. 7 | 10' Dist. æquat. | |
| | a corde Ω | 74 54 |
| | adde | 4 |
| | Distantia æquat. vera | 74 58 |
| | Declinatio ♀ obser. | 14 33 $\frac{1}{2}$ |
| | adde | 9 |
| | Declin. vera ♀ | A. 14 42 $\frac{1}{2}$ M. |
| | Afcenfio R. ♀ vera | 221 33 |
| | Resp. Longitudo ♀ | 13 36 $\frac{1}{3}$ M |
| | Latitudo | 1 19 $\frac{1}{2}$ B. |

DIE 11 NOUEMBRIS A. M.

| | | |
|--------------------|-----------------------|-----------------------|
| H. 6 $\frac{1}{2}$ | Dist. æquat. ♀ | |
| | a corde Ω vera | 76 31 |
| | Declin. vera Au. | 15 20 |
| | Afcenf. R. ♀ vera | 223 6 |
| | Hinc Longitudo ♀ | 15 13 $\frac{1}{2}$ M |
| | Latitudo | 1 10 $\frac{1}{4}$ B. |

RECAPITULATIO OBSERATIONUM ♀

habita ratione refractionis in Afcensione Recta & Declinatione & simul parallaxeos in Longitudine & Latitudine.

Ex obseruatione

| | Tempus A. M. | Decl. vifa M. | Dist. æquat. a corde Ω vifa | Decl. vera M. | Afc. R. vera | Longi- tudo | Lati- tudo B. |
|---------|-----------------|---------------------|---------------------------------------|---------------------|----------------------|----------------------------------|--------------------|
| Oct. 25 | 6 30 | 6 39 | 55 13 | 6 44 | 201 49 $\frac{1}{2}$ | 22 39 <u>Ω</u> | 2 19 $\frac{1}{4}$ |
| 29 | 7 0 | 8 8 | 59 0 $\frac{1}{2}$ | 8 11 | 205 35 $\frac{2}{3}$ | 26 40 $\frac{1}{4}$ | 2 20 |
| 31 | 6 10 | 8 59 | | 9 8 | | 29 8 | 2 15 $\frac{1}{2}$ |
| Nou. 1 | 6 30 | 9 30 $\frac{1}{2}$ | 62 27 $\frac{1}{2}$ | 9 37 $\frac{1}{3}$ | 209 5 $\frac{1}{2}$ | 0 24 M | 2 12 $\frac{1}{2}$ |
| 2 | 7 0 | 10 5 $\frac{1}{2}$ | 63 45 $\frac{1}{2}$ | 10 10 $\frac{1}{3}$ | 210 22 | 1 46 $\frac{1}{3}$ | 2 7 $\frac{3}{4}$ |
| 4 | 6 57 | 11 10 | 66 24 | 11 16 | 213 1 $\frac{2}{3}$ | 4 35 $\frac{1}{2}$ | 1 58 $\frac{1}{2}$ |
| 7 | 7 10 | 12 53 | 70 35 $\frac{1}{2}$ | 13 0 | 217 15 | 9 4 $\frac{1}{4}$ | 1 42 |
| 8 | 7 15 | 13 28 | 72 2 | 13 35 | 218 40 $\frac{1}{4}$ | 10 34 | 1 34 $\frac{2}{3}$ |
| 10 | 7 10 | 14 33 $\frac{1}{2}$ | 74 54 | 14 42 $\frac{1}{2}$ | 221 33 | 13 34 | 1 21 $\frac{1}{2}$ |
| 11 | 6 30 | 15 8 | 76 26 | 15 20 | 223 6 | 15 11 $\frac{1}{4}$ | 1 12 |

Ex Alphonfino calc. Cypr.

| | Long. | excedit | Latit. B. | deficit |
|---------|-----------------------------------|--------------------|--------------------|--------------------|
| Oct. 25 | 25° 37' Ω | 2° 58' | 1° 44' | 0° 35' |
| 29 | 27 39 | 0 59 | 1 46 | 0 34 |
| | | deficit | | |
| 31 | 29 6 | 0 2 | 1 44 | 0 31 $\frac{1}{2}$ |
| Nou. 1 | 29 55 $\frac{1}{2}$ | 0 28 $\frac{1}{2}$ | 1 42 | 0 30 $\frac{1}{2}$ |
| 2 | 0 50 $\frac{1}{8}$ \mathfrak{M} | 0 56 | 1 39 | 0 28 $\frac{3}{4}$ |
| 4 | 2 53 | 1 42 $\frac{1}{2}$ | 1 33 | 0 25 $\frac{1}{2}$ |
| 7 | 6 14 | 2 50 $\frac{1}{4}$ | 1 22 | 0 20 |
| 8 | 7 25 | 3 9 | 1 16 $\frac{1}{2}$ | 0 18 |
| 10 | 9 56 $\frac{1}{2}$ | 3 38 | 1 2 | 0 19 $\frac{1}{2}$ |
| 11 | 11 14 | 3 57 $\frac{1}{4}$ | 0 55 | 0 17 |

E Prutenico Mæstlini

| Long. | excedit | Latit. B. | deficit |
|----------|---------|-----------|---------|
| 24°29½'Ω | 1°50½' | 0°49' | 1°30¼' |
| 28 15 | 1 35 | 1 6½ | 1 13½ |
| 0 20 m | 1 12 | 1 16 | 0 59½ |
| 1 29 | 1 5 | 1 20 | 0 52½ |
| 2 42½ | 0 56 | 1 19 | 0 48¾ |
| 5 15 | 0 39½ | 1 14 | 0 44½ |
| 9 19⅓ | 0 15 | 1 8 | 0 34 |
| 10 45 | 0 11 | 1 6 | 0 28⅔ |
| 13 39 | 0 5 | 1 2 | 0 19½ |
| | deficit | | |
| 15 6 | 0 5 | 1 0 | 0 12 |

Motus Longitudinis γ
intermedius

| | Obferuatus | Alphonfinus | Prutenicus |
|------------|----------------------|--------------------|-----------------------|
| a 25 in 29 | 4° 1 $\frac{1}{4}$ ' | 2° 2' | 3° 45 $\frac{1}{2}$ ' |
| a 29 in 31 | 2 27 $\frac{3}{4}$ | 1 27 | 2 5 |
| a 31 in 1 | 1 16 | 0 49 $\frac{1}{2}$ | 1 9 |
| ab 1 in 2 | 1 22 | 0 55 | 1 13 $\frac{1}{2}$ |
| a 2 in 4 | 2 49 | 2 3 | 2 32 $\frac{1}{2}$ |
| a 4 in 7 | 4 29 | 3 21 | 4 4 |
| a 7 in 8 | 1 29 $\frac{3}{4}$ | 1 11 | 1 26 |
| ab 8 in 10 | 3 0 | 2 31 $\frac{1}{2}$ | 2 54 |
| a 10 in 11 | 1 37 | 1 17 $\frac{1}{2}$ | 1 27 |

Motus
diurnus æqualiter
ex obseruatione
proueniens

| |
|----------------------|
| 1° 0 $\frac{1}{2}$ ' |
| 1 14 |
| 1 16 |
| 1 22 |
| 1 25 |
| 1 29 $\frac{2}{8}$ |
| 1 29 $\frac{1}{2}$ |
| 1 30 |
| 1 37 |

Diurnus γ motus

| Oct. | Obferuatus | Alphonfinus | Prutenicus | Nov. | Obferuatus | Alphonfinus | Prutenicus |
|--------|------------|-------------|------------|------|--------------------|-------------|------------|
| 25 | 0° 55' | 0° 23' | 0° 52' | 3 | 1° 27' | 1° 3' | 1° 18' |
| 26 | 0 58 | 0 29 | 0 56 | 4 | 1 28 | 1 5 | 1 20 |
| 27 | 1 2 | 0 34 | 0 59 | 5 | 1 29 | 1 8 | 1 22 |
| 28 | 1 6 | 0 38 | 1 1 | 6 | 1 30 | 1 9 | 1 24 |
| 29 | 1 9 | 0 43 | 1 3 | 7 | 1 29 $\frac{1}{2}$ | 1 12 | 1 26 |
| 30 | 1 13 | 0 47 | 1 5 | 8 | 1 30 | 1 15 | 1 27 |
| 31 | 1 16 | 0 50 | 1 9 | 9 | 1 30 | 1 18 | 1 28 |
| Nov. 1 | 1 22 | 0 55 | 1 13 | 10 | 1 37 | 1 20 | 1 29 |
| 2 | 1 25 | 1 1 | 1 15 | | | | |

Puto obseruationem diej 10 esse incertam.

Fuit itaque γ ex obseruatione in maxima remotione a medio loco Solis die 26 $\frac{1}{2}$ quasi, cuius penitorem inquisitionem potes indagare vna cum loco ipsius propter apogæum.

Recapitulatio selectarum obseruationum in γ per Triangulorum
supputationem pro motu eius restituendo¹.

DIE 29 OCTOBRIS.

Cum γ esset in maxima digressionem
matutina a \odot .

Obseruationes visæ.

| | |
|-----------------------------|-----------------------------|
| Dist. eius a cauda \odot | 41° 26½' |
| Declin. γ M. | 8 5 |
| Declin. caudæ \odot | 16 53½ |
| Ascens. recta caudæ | 171 58½ |
| Angulus differentiae | |
| Ascensionalis | 33 26½ |
| Idcirco Ascens. R. γ | 205 25½ |
| Resp. Longitudo | 26 29 56 $\frac{\Omega}{B}$ |
| Latitudo | 2 20 16 $\frac{\Omega}{B}$ |
| Alt. γ 6½° | |
| Refraction 8' 0" | |
| Parallax. 3 30 | Long. 3' 20" add. |
| Differentia 4½ | Lat. 2 45 subtr. |
| Ergo vera γ Longit. | 26 33½ $\frac{\Omega}{B}$ |
| Latit. | 2 17½ Bor. |

DIE 25 OCTOBRIS.

| | |
|--------------------------------------|--------|
| H. 7½ Dist. γ a cauda \odot | 37 39½ |
| Declin. γ | 6 37½ |

| | |
|--------------------------|---------------------------|
| Angulus diff. Ascens. | 29 45 20 |
| Ergo Ascens. R. γ | 201 44 0 |
| Resp. Longitudo | 22 33½ $\frac{\Omega}{B}$ |
| Latitudo | 2 21½ Bor. |
| Alt. 6°, Refraction 9' | |
| Parallax 3 30 | Long. 3 50 add. |
| 5 30 | Lat. 3 40 subtr. |
| Vera Longitudo | 22 37½ $\frac{\Omega}{B}$ |
| Latitudo | 2 17 40 |
| | Bor. |

DIE 11 NOUEMBRIS.

| | |
|---|----------------------------|
| H. 6½ Dist. γ a corde \odot æquat. | 76 26 satis certa |
| Ascens. recta cordis \odot | 146 33½ |
| Igitur Ascensio R. γ | 222 59 30 |
| Longitudo | 15 4¼ $\frac{\Omega}{B}$ |
| Latitudo | 1 20½ Bor. |
| Alt. γ 3½°. Refr. 12' | |
| Parall. 3 | Long. 6' 50" add. |
| 9' | Lat. 5 40 subtr. |
| Vera γ Longitudo | 15 11 0 $\frac{\Omega}{B}$ |
| Latitudo | 1 14½ Bor. |

OBSERUATIONES STELLARUM FIXARUM IN ZODIACO,
ET PRIMO QUIDEM EARUM QUÆ SUNT
IN ARIETE.

DIE 13 JANUARIJ.

Altitudo Merid. Lucidæ γ 55 33
per Q. Volub. post correctam pinnacidia
& centrum quadrantis reuisum & red-
integratum.

Declinatio Lucidæ γ per Armillas
maximas, vno pinn. 21 29½
altero 21 29¼

DIE 14 JANUARIJ.

Altitudo Lucidæ γ 55 32½
Post rectificata pinnacidia Qua-
drantis & Sextantem nouum dili-
genter reuisum.

¹ E codice V.

DIE 15 JANUARIJ.

Vesperis videbatur Caput γ in Meri-
diano habere Altitudinem
per Q. Volub. 55 34
Per Armillas Declinatio 21 28
vtrouque pinn.

DIE 7 FEBRUARIJ.

Pro Stellis γ .

| | |
|--|--------|
| Declin. per Armillas | |
| 1. γ secundum Copern., vtrouque pinn. | 17 14½ |
| 2. sequens in cornu infer. γ | 18 46 |
| alt. pinnacidio | 18 45½ |
| 3. Luc. supra caput γ | 21 28½ |
| alt. pinnacidio | 21 28½ |

Differentia Ascenf. Rectæ 1 ∇ ab
 oculo γ per Armillas I 40 17 $\frac{1}{2}$
 II 40 20
 III 40 17 40
 IV 40 17 30
Vtere 40 18 $\frac{1}{2}$.

Differentia Ascenf. R. 1 ∇
 & lucidæ in humero I 60 24 45
 Orionis II 60 23 20
 III 60 24 30
 IV 60 23 0
 V 60 24 30

Poteris absque omni sensibili errore
 vti 60 24.

DIE 13 FEBRUARIJ.

Pro stellis ∇ 40 6 10
 Differ. æquat. inter 40 4 45
 oculum γ & secun- 40 3 45
 dam in primo cornu 40 4
 ∇ 40 3 $\frac{1}{4}$
 40 6
 40 3 $\frac{1}{2}$

Sed potes absque sensibili errore vti
 distantia æquatoria 40 5
 Deinde vno pinnacidio } 40 4 $\frac{1}{2}$
 fixo manente inuenta est } 40 5
 Dist. æquat. lucidæ 37 3
 cap. ∇ & oculi γ 37 4
 37 3 $\frac{1}{2}$
 Potes absque sensibili errore 37 3 $\frac{1}{2}$
 vti 37 3 $\frac{1}{2}$

Inter eam quæ est supra caudam ∇
 & oculum γ capta est distantia ad
 vespas 26 44 $\frac{1}{6}$
 per Sext. Δ 26 44

| | Declin. | Dist. asc. ab oculo γ |
|-----------------|---------|---------------------------------|
| Lucidæ supra | 25 31 | 26 34 |
| caudam ∇ | 25 31 | |
| per Armill. | 25 31 | 26 34 $\frac{1}{4}$ |
| subterr. | 25 31 | 26 31 |

DIE 23 SEPTEMBRIS.

Prima ∇ in Meridiano
 per Q. Volub. 51 20 $\frac{1}{6}$
 Declin. inde proueniens 17 14 $\frac{2}{3}$
 Declin. per Armillas 17 15 0
 Luc. infer. cornu ∇
 per Q. Volub. 52 51 0

Declin. hinc proueniens 18 45 30
 Declin. per Armillas 18 46 0
 Lucida cap. ∇ in Mer.
 per Q. Vol. 55 34 $\frac{1}{4}$
 Declin. hinc proueniens 21 28 $\frac{3}{4}$
 Declin. per Armillas 21 29 $\frac{1}{4}$

DIE 28 SEPTEMBRIS

Decl. Luc. ∇ per Armillas 21 30
 alt. pin. 21 29 $\frac{5}{6}$

Altitudo 21 47 cum a meridiano ad
 ortum eßet.

DIE 30 SEPTEMBRIS.

Lucida inferioris cornu ∇
 in merid. 52 50 $\frac{1}{3}$
 Declin. ex Altitud. 18 44 $\frac{5}{6}$
 Declin. per Armillas 18 47
 altero pinnacid. 18 46 $\frac{5}{6}$
 Luc. cap. ∇ Alt. Merid. 55 33 $\frac{5}{6}$
 Declin. ex Altitud. 21 28 $\frac{1}{3}$
 Declin. per Armill. 21 29 $\frac{1}{2}$
 altero pinnacidio 21 30

DIE 10 OCTOBRIS.

H. 12 5' 0" fuit luc. ∇ in Merid.
 Alt. habens 55 34 $\frac{1}{3}$
 Declin. per Armillas 21 28 $\frac{3}{4}$
 Alt. pinnacid. 21 28 $\frac{5}{6}$

DIE 18 OCTOBRIS.

Posito loco Vulturis in 26 0 γ
 obseruabatur lucida I 1 47 γ
 ∇ per Armillas II 1 48 γ
 Zodiacales III 1 47 γ
 Fuit tunc Altitudo lucidæ Vulturis
 quasi 15 p.

DIE 7 NOUEMBRIS.

Inter oculum γ I 38 39 $\frac{3}{8}$
 & primam ∇ II 38 39 $\frac{1}{2}$
 per Sext. Δ III 38 39 $\frac{1}{4}$
 Inter oculum γ I 38 23
 & infer. cornu ∇ II 38 22 $\frac{1}{2}$
 per Sext. Δ III 38 23
 Inter oculum γ & I 35 33 $\frac{3}{4}$
 lucid. ∇ per Sext. Δ II 35 33 $\frac{3}{4}$
 Inter ocul. γ & luci- I 26 46
 diorem in cauda ∇ II 26 46 $\frac{1}{2}$

| | |
|----------------------------------|---------------------|
| Declin. primæ V | 17 15 |
| Declin. infer. cornu V | 18 47 $\frac{1}{2}$ |
| Declin. lucidæ V | 21 28 $\frac{3}{4}$ |
| Declin. lucidioris in cauda V | 25 31 |

DIE 16 NOUEMBRIS.

| | |
|--|-----------------------------|
| Instrumento fixato. | |
| Lucida V orient. | 57 30 |
| Infer. cornu γ occid. | 29 4 |
| Dist. æquat. | 86 34 |
| Altitud. merid. sequentis in cornu V per Volubilem | 52 51 $\frac{1}{2}$ |
| Posito oculo γ in 4°2' II obser- uatus est locus lucidæ V in | 1 55 $\frac{3}{4}$ γ |
| Rurfus in | 1 56 γ |

DIE 6 DECEMBRIS.

| | |
|---------------------------|-------|
| Decl. luc. V per Arm. vno | 21 28 |
| alt. pin. | 21 28 |

DIE 27 DECEMBRIS.

| | |
|---|---------------------|
| H. 6 Lucidum cornu V in Meridiano habuit Altitud. | 52 51 $\frac{2}{3}$ |
| 6 28 40 Lucida super caput V in merid. alt. habuit | 55 34 $\frac{2}{3}$ |

DIE 31 DECEMBRIS.

Postea obseruabam stellas V per
Meridianum verificatis pinnacidis.
H. 6 15' 45" Prima V

| | |
|---|---|
| Alt. per Volub. | 51 19 $\frac{1}{2}$ |
| 6 16 47 $\frac{1}{2}$ Sequens V in cornu, | |
| Altitud. per Volub. | 52 51 |
| 6 28 58 Tertia lucida V, | |
| Altitud. per Volub. | 55 34 $\frac{1}{2}$ vel 34 $\frac{1}{3}$ |

Postea accipiebantur declinationes
stellarum V cum essent iuxta merid.
per Armill. maio.

| | |
|---------------------|--------------------------|
| Declin. primæ V qua | vno 17 14 $\frac{1}{2}$ |
| usus est Copernicus | alt. 17 $\frac{1}{4}$ |
| Sequens in cornu V | vno 18 45 $\frac{1}{2}$ |
| Tertia & lucida | alt. 18 45 $\frac{2}{3}$ |
| cap. V | vtroque 21 28 |

OBSERUATIONES STELLARUM IN TAURO.

DIE 13 JANUARIJ.

| | |
|-----------------------------------|---------------------|
| Altitud. oculi γ Meridiana | 49 40 $\frac{1}{4}$ |
| Declin. Aldeb. in Mer., vno | 15 37 $\frac{1}{2}$ |
| altero pin. | 15 37 $\frac{1}{2}$ |
| Quadrans dedit. | 15 34 45 |

DIE 14 JANUARIJ.

| | |
|------------------------------|----------|
| Alt. merid. { per Sext. nou. | 49 41 40 |
| Aldeb. { per Q. Volub. | 49 40 35 |
| Declin. per Armill., vno | 15 36 30 |
| altero pinn. | 15 36 0 |

DIE 15 JANUARIJ.

| | |
|-----------------------------------|---------------------|
| Alt. Merid. { per Q. Tich. | 45 21 |
| pectoris γ { per Q. Volub. | 45 21 0 |
| { per Sext. nou. | 45 21 15 |
| Declin. eiusdem { vno pin. | 11 15 $\frac{1}{2}$ |
| per Armill. { altero | 11 15 $\frac{1}{2}$ |
| Oculus γ per Q. Volub. | 49 41 5 |
| vel 10" ad summum | |
| per Sext. nouum | 49 42 0 |

| | |
|---------------------------|---------------------|
| Declin. per Armill., vno | 15 35 $\frac{1}{2}$ |
| alt. pin. | 15 36 |
| Alt. per Q. Tichon. | 49 41 $\frac{2}{3}$ |
| Lucida Pleiadum in Merid. | |
| per Q. Tichon. | 56 51 |

DIE 16 JANUARIJ.

| | |
|--|---------------------|
| Aldebor. { per Q. Portat. | 49 41 |
| in Merid. { per Sext. nouum | 49 42 $\frac{1}{3}$ |
| Declin. per Armillas | 15 36 |
| Alt. pinnacidio | 15 36 $\frac{1}{2}$ |
| Reiterata | 15 35 $\frac{2}{3}$ |
| Eadem | 15 36 |
| Vtere itaque declinatione oculi γ | |
| 15 36 absque omni sensibili errore. | |
| Muralis Quadrans dat | 49 41 45 |
| | 34 5 30 |
| Declin. (satis conuenit) | 15 36 15 |
| Eodem die Oculus γ | |
| per Quadrantem Tichon. | 49 41 $\frac{2}{3}$ |
| per Sext. veterem | 49 42 |
| Luc. Pleiad. per Q. Tich. | 56 50 |

DIE 21 JANUARIJ.

| | | |
|---|----|------------------|
| Alt. [Aldeb.] ¹ per Q. Tichon. | 49 | 42 |
| Alt. pinnacid. | 49 | 42 $\frac{1}{3}$ |
| Lucida Pleiadum per Tich. | 56 | 49 $\frac{3}{4}$ |

DIE 23 JANUARIJ.

| | | |
|-------------------------------------|----|------------------|
| Lucida Pleiadum | | |
| per Q. Tich. | 56 | 50 |
| Alt. pinnacid. | 56 | 50 $\frac{1}{4}$ |
| Oculus γ per Quad. Tich. | 49 | 41 $\frac{3}{4}$ |
| Alt. pinnacid. | 49 | 41 $\frac{5}{6}$ |
| Boreale cornu γ per Q. Tich. | 62 | 15 $\frac{5}{6}$ |
| Alt. pinnacid. | 62 | 16 |

DIE 1 FEBRUARIJ.

| | | |
|---|----|------------------|
| Altit. Merid. Oculi γ per Q. Tich. | | |
| vtroque pinnacidio | 49 | 41 $\frac{3}{4}$ |

DIE 5 FEBRUARIJ.

| | | |
|--|----|-------|
| Oculus γ in Merid. per Q. Tichon. | | |
| vtroque pinnacidio | 49 | 41 40 |

DIE 7 FEBRUARIJ.

| | | |
|------------------------------------|----|------------------|
| Oculus γ in Merid. | | |
| per Q. Tichon | 49 | 41 40 |
| altero pinnacidio | 49 | 41 35 |
| Declin. vno | 15 | 36 $\frac{1}{6}$ |
| altero | 15 | 36 |
| Merid. cornu γ per Q. Tich. | 54 | 54 0 |
| altero pinn. | 54 | 53 55 |

DIE 24 SEPTEMBRIS.

| | | |
|------------------------------------|----|-------|
| Oculus γ in Mer. per Volub. | 49 | 42 0 |
| Declin. ex altitudine | 15 | 36 30 |
| Declin. per Armillas | 15 | 37 0 |

DIE 7 NOUEMBRIS.

| Mane | Lucida Pleiadum occ. | Cor Ω or. | Dift. æq. |
|---------|-------------------------|---------------------|---------------------|
| 3 33 50 | 57 34 | 38 9 $\frac{3}{4}$ | 95 43 $\frac{3}{4}$ |
| 3 36 40 | 58 20 $\frac{1}{2}$ | 37 22 $\frac{5}{6}$ | 95 43 $\frac{3}{8}$ |
| 3 39 10 | 59 0 $\frac{1}{4}$ | 36 43 $\frac{1}{2}$ | 95 43 $\frac{3}{4}$ |

Pone distantiam æquatoriam inter
cor Ω & Lucidam Pleiadum 95 43 $\frac{1}{2}$
Declinatio lucidæ Pleiad. 22 46 $\frac{1}{4}$

| | | |
|-------------------------|----|------------------|
| pectoris γ | 11 | 16 $\frac{1}{2}$ |
| oris γ | 14 | 34 $\frac{3}{4}$ |
| mediæ inter succulas | 16 | 30 |
| borealis oculi γ | 18 | 12 $\frac{1}{2}$ |
| frontis γ | 14 | 56 |
| Aldeboræ | 15 | 36 $\frac{1}{2}$ |

Pectus γ

| Pectus γ occ. | Cor Ω or. | Diff. Asc. |
|----------------------|------------------|--|
| 4 14 $\frac{1}{2}$ | 64 29 | 27 33 $\frac{1}{2}$ 92 2 $\frac{1}{2}$ |
| 4 17 $\frac{1}{3}$ | 65 16 | 26 46 $\frac{1}{4}$ 92 2 $\frac{1}{4}$ |
| 4 19 $\frac{1}{4}$ | 65 54 | 26 9 92 3 |

Pone differentiam Ascens. hanc

92 2 $\frac{3}{8}$

Os γ

| Os γ occ. | Cor Ω orient. | |
|-------------------------------|----------------------|---|
| incerta prop- ter chasmata | 62 22 $\frac{1}{6}$ | 24 58 $\frac{1}{2}$ 87 20 $\frac{3}{8}$ |
| | 63 6 | 24 18 87 24 |
| | 63 44 $\frac{1}{2}$ | 23 40 $\frac{1}{2}$ 87 25 |
| | 64 12 | 23 11 87 23 |
| | 64 45 $\frac{1}{2}$ | 22 40 87 25 $\frac{1}{2}$ |
| | Pone | 87 24 $\frac{1}{2}$ |

Borealis oculus γ

| Bor. oc. γ occ. | Cor Ω or. | |
|------------------------|---------------------|---------------------|
| 63 42 $\frac{1}{2}$ | 21 38 $\frac{3}{4}$ | 85 21 $\frac{1}{4}$ |
| 64 6 | 21 15 $\frac{1}{2}$ | 85 21 $\frac{1}{2}$ |
| 64 33 $\frac{1}{2}$ | 20 46 $\frac{1}{2}$ | 85 20 |

Pone hanc differ. cordis Ω & Bore-
alis oculi γ 85 21

Frons γ illa quæ est inter Aldebo-
ram & Os.

| Frons γ occ. | Cor Ω or. | |
|---------------------|---------------------|---------------------|
| 71 42 $\frac{3}{4}$ | 13 30 | 85 12 $\frac{3}{4}$ |
| 72 20 $\frac{1}{2}$ | 12 52 $\frac{1}{2}$ | 85 13 |

DIE 8 NOUEMBRIS MANE.

Diftabat oculus γ a Meridiano ad
occasum

| | | |
|------------------------|---------------------|---------------------------|
| 1 ^H 58' 15" | 22° 46' | In meridiano correctum |
| 1 59 0 ² | 22 53 $\frac{1}{2}$ | |

Hinc potest verificari horologium.

| | |
|---------------------------------|-------|
| Declin. borealis cornu γ | 28 10 |
| Declin. australis cornu | 20 48 |
| Declin.incipitis γ | 22 5 |
| Decl. infimæ in auftr. cornu | 20 55 |

¹ Cf. supra p. 53.

² Adscripta sunt infra tempora: »tardius 0 13 21« et »tardius 0 13 8«.

Distantiæ æquatoriæ.
Media succularum inter oculum B.
& os ♂.

| Med. succ. occ. | Cor ♂ or. | |
|-------------------|-----------|--------|
| 59 15 | 27 28 | 86 43 |
| 60 16 | 26 26½ | 86 42½ |
| 60 43½ | 26 0 | 86 43½ |
| Pone diff. æquat. | | 86 43 |

Australis cornu ♂

| Auft. cor. occ. | Cor ♂ or. | |
|------------------------|-----------|--------|
| 46 21½ | 21 53 | 68 14½ |
| 47 29 | 20 47½ | 68 16½ |
| 48 5¼ | 20 10 | 68 15¼ |
| 48 27 | 19 49½ | 68 16½ |
| Pone hanc diff. æquat. | | 68 16 |

Boreale cornu ♂

| Bor. cor. ♂ occ. | Cor ♂ or. | |
|---------------------|--------------|--------|
| 55 17¼ | 16 12¼ | 71 29½ |
| 56 3 | 15 26¾ | 71 29¾ |
| 57 30 | 13 59¾ | 71 29¾ |
| Pone | | 71 29¾ |

Sinciput ♂

| Sinciput occ. | Cor ♂ or. | |
|---------------|-----------|-------|
| 69 36½ | 12 31½ | 82 7½ |
| 70 34¼ | 11 34 | 82 8¼ |

DIE 16 NOUEMBRIS.

H. 12 1' 15" tranſiit oculus ♂ per Me-
ridianum habuitque Altitudinem
meridianam 49 42¼

OBSERVATIONES STELLARUM IN GEMINIS.

DIE 14 JANUARIJ.

Lucidus pes ſequentis II
per Q. Volub. 50 44¼
Inferior pes ſequentis II
per Q. Volub. 47 20⅝
per Sext. nou. 47 21
Declin. eiſdem per Armill. 13 15⅝
Declin. ex altit. dat. 13 15½
Inter nubes.

DIE 15 JANUARIJ.

Declin. ſuperioris II 32 42¾
verſus ortum. Eſt autem declin. eiſ
32 42½, igitur inſenſibiliter differt.
Femur inferioris II
per Q. Volub. 51 18⅝
per Sext. 51 19½
Declin. eiſdem, vno 17 12½
alt. pin. 17 12⅝
Superius caput II
per Q. Volub. 66 47
Declin. per Armill., vno 32 42½
alt. pin. 32 42⅝
Inferius caput II
per Q. Volub. 63 2
Declin. per Armill. 28 55½
Repetita, vtroque pinnac. 28 56

DIE 16 JANUARIJ.

Extrema pedis II
per Q. Tichon. 56 37¾
Calx pedis II per Q. Tichon. 56 43¾
Lucida pedum II per Q. Tichon.
vtroque pinnac. 50 45⅝
per Sext. Vet. 50 46⅝

DIE 21 JANUARIJ.

Lucida in pedibus II
per Q. Tichon.
vno pinnacid. 50 45⅝
alt. pinnacid. 50 46
Superius caput II
per Q. Tichon.
vtroque pinnac. 66 48
Inferius caput II per Q. Tich. 63 2¼
alt. pinnac. 63 2⅝

DIE 23 JANUARIJ.

Propus II per Q. Tichon. 56 44⅝
alt. pinnacid. 56 44⅝
Lucidus pes inferioris II 50 46
alt. pinnac. 50 46⅝
Superius caput per Q. Tich. 66 48
alt. pinnacid. 66 47¾
Inferius caput II per Q. Tichon.
vtroque pinnacidio 63 2⅝

DIE 1 FEBRUARIJ.

Extrema pedis II per Q. Tich. 56 38 5
alt. pinnacidio 56 38

Calx pedis II per Q. Tichon.
vtroque pinnacidio 56 43 40

| | Declin. | Altit. |
|-----------------|---------|------------------|
| Infer. caput II | 28 59 | 17 $\frac{2}{3}$ |
| Super. caput II | 32 44 | 18 $\frac{2}{3}$ |

Cum ad horizontem occid. vergerent.

Vera declinatio 32 42 $\frac{1}{2}$, differentia 1 $\frac{1}{2}$ ob refractionem.

Nota. Circa altitudinem 18 partium infer. caput II per refractionem habuit declinationem duobus scrupulis iusto maiorem & superius caput eodem modo scrupulo 1 $\frac{1}{2}$.

DIE 3 FEBRUARIJ.

Extrema pedis II
per Q. Tich. 56 37 40
Alt. pinnacidio 56 38

Calx pedis II per Q. Tich. 56 43 30
vtroque pinnacidio

Lucida in pedibus II
per eundem vtroque, 50 45 45

Stella in genu II per Tichon. 59 32 40
alt. pinnac. 59 32 45

Altera in pedibus II sublucida 47 21 20

Superius caput II vno pinn. 66 47 25
alt. pinnac. 66 47 30

Inferius caput II vno pin. 63 1 55
alt. pinnac. 63 2 0

per Q. Tichon.

DIE 7 FEBRUARIJ.

Per Q. Tichonicum

Extrema pedis II 56 37 50
56 37 55

Calx pedis II 56 43 30
56 43 35

Lucida pedum II 50 45 35
50 45 30

Genu II 59 32 35
59 32 40

In corpore II, vtroque 51 17 45
Alia in corpore 56 45 0
56 45 10

Inferius caput II 63 2 10
63 2 5

Declin. infer. cap. II 28 59 $\frac{2}{3}$

Altit. 14

Declin. super. cap. II 32 45

Altit. 16

Est itaque quasi Refractio in 3 M. in declinatione.

DIE 13 FEBRUARIJ.

Per Sext. Δ

Inter cor \odot & Merid. caput II 37 1
37 1

Inter cor \odot & Bor. caput II 40 32 $\frac{1}{2}$
Cum æqualiter fere 40 32 $\frac{1}{2}$
a meridiano distarent

Postea per Sext. Δ vet.

Inter infer. caput II & Cor \odot 37 0 $\frac{1}{4}$
II 37 0 $\frac{1}{4}$

Erat tunc Alt. infer. cap. II q. 15

Inter super. cap. II & Cor \odot 40 32
II 40 32

Altit. superioris cap. q. 15.

DIE 4 MARTIJ.

Altit. Merid. infer. cap. II
per Q. Tichon. 63 2 $\frac{1}{2}$

Alt. pinnacid. 63 2 $\frac{1}{2}$

DIE 5 MARTIJ.

Altit. Merid. infer. cap. II 63 2 $\frac{1}{2}$
per Q. Volub. 63 1 $\frac{3}{4}$

Declin. per Armill. 28 56

DIE 8 NOUEMBRIS A. M.

Altit. Merid. superioris
capitis II 66 48

Declin. per Armill., vtroque 32 42

H. 3 48' 0" Alt. mer. inf. cap. II 63 2

Declin. eiusdem, vtroque 28 56 $\frac{1}{2}$

DIE 26 DECEMBRIS.

H. 11 58' 35" Tranſiit ſuperius caput

II per Merid. habens Alt. 66 48

H. 12 10 22 Inferius caput II

per Merid. habens Alt. 63 2 $\frac{1}{2}$

Declin. ſuper. cap. II,
vtrouque pin. 32 41

Declin. inferioris, vno 28 56

altero pinnacid. 28 55 $\frac{1}{2}$

OBSERVATIONES STELLARUM IN CANCRO.

DIE 7 FEBRUARIJ.

| | |
|-------------------------------------|-----------|
| Pro stellis ☿. Declin. per Armillas | |
| Chele Australis ☿ | 13 25 |
| Præsepe & nebuloſa | |
| in pectore | 20 59½ |
| Afellus Australis | 19 36 |
| Afellus Borealis | 22 52½ |
| Chele Borealis | 30 12 |
| Differentia Aſcenſionis Rectæ | |
| Chele Australis a corde ♄ | I 17 34½ |
| | II 17 35 |
| Nebuloſæ ☿ & cordis ♄ | I 22 26½ |
| | II 22 28½ |
| | III 22 25 |
| Potes vti | 22 27 |

| | |
|---------------------|---------------|
| Australis Afelli | I 21 14¼ |
| a corde ♄ | II 21 14½ |
| | III 21 14¾ |
| Borealis Afelli | I 21 43 |
| a corde ♄ | II 21 43¾ |
| Chele Boreal. ☿ | I 21 9½ |
| a corde ♄ | II 21 8 |
| | III 21 8½ |
| Alt. Merid. præsepe | 55 19 |
| per Tichon. | alt. 55 19 25 |

DIE 5 MARTIJ.

| | |
|-----------------------------------|--------|
| Altit. Merid. Australis branchæ ☿ | |
| per Q. Volub. | 47 30 |
| Declin. eius per Armill. | 13 24½ |

OBSERVATIONES STELLARUM IN LEONE.

DIE 15 JANUARIJ.

| | |
|----------------------------|--------|
| Alt. Mer. Cordis ♄ | |
| per Q. Volub. | 48 3¼ |
| per Sextant. | 48 4 |
| Declin. per Armill. | 13 57¾ |
| alt. pinnacidio | 13 57½ |
| Alt. infimæ Ceruicis ♄ | |
| per Q. Volub. | 52 49¾ |
| Declin. per Armill. | 18 44½ |
| alt. pinnacidio | 18 45 |
| Alt. med. Ceru. per Volub. | 55 59¾ |
| Decl. eius per Armill. | 21 53½ |
| alt. pinnacidio | 21 54 |
| Alt. supremæ in ceruice ♄ | |
| per Q. Volub. | 59 31½ |
| Declin. eius per Armill. | 25 26½ |
| alt. pinnacid. | 25 26¼ |
| Alt. supremæ in Coxa ♄ | |
| per Q. | 56 52½ |
| Decl. eiusdem per Armill. | 22 46¾ |
| alt. pinnacid. | 22 46½ |
| Alt. infimæ in Coxa ♄ | |
| per Q. Volub. | 51 45¼ |
| per Sext. Δ | 51 46½ |

Declin. per Armill. 17 41
alt. pinnacid. 17 40½

| | |
|--|--------|
| Alt. Mer. Caudæ ♄ | |
| per Q. Volub. | 50 59 |
| per Sext. Δ | 51 0 |
| fed non ſatis exacte incidit perpendi- culum in lineam. | |
| Declin. per Armill. | 16 52¾ |
| alt. pinnacidio | 16 53 |

DIE 23 JANUARIJ A. M.

| Cor ♄ | | |
|-----------------|---------|--------|
| Cor ♄ | Spica ♄ | Dist. |
| occident. | occ. | æquat. |
| 54 42½ | 5 22½ | 49 20 |
| 55 9 | 5 48½ | 49 20½ |
| 55 35 | 6 14¾ | 49 20¼ |
| Ceruix ♄ | | |
| Lucida Ceruicis | Spica ♄ | Dist. |
| ♄ occid. | occ. | æquat. |
| 54 42½ | 8 4¼ | 46 38¼ |
| 55 52¾ | 9 14 | 46 38¾ |
| 56 40¼ | 9 59¼ | 46 41 |
| 57 16 | 10 37 | 46 39 |
| 57 46 | 11 9 | 46 37 |

Coxa Ω

| Coxa Ω occid. | Spica \mathbb{M} occ. | Dift. æquat. | |
|-------------------------|----------------------------|---------------------|------------------------|
| 44 28 | 11 33 $\frac{1}{2}$ | 32 54 $\frac{1}{2}$ | } non fa- tis certæ |
| 45 3 | 12 9 $\frac{1}{2}$ | 32 53 $\frac{1}{2}$ | |
| 45 46 $\frac{1}{4}$ | 12 54 | 32 52 $\frac{1}{4}$ | |
| 46 35 | 13 42 $\frac{1}{2}$ | 32 52 $\frac{1}{2}$ | |
| 47 42 $\frac{1}{2}$ | 14 50 | 32 52 $\frac{1}{2}$ | |

Cauda Ω

| Cauda Ω occid. | Spica occid. | Dift. æquat. |
|--------------------------|--------------------|---------------------|
| 39 32 $\frac{1}{4}$ | 15 39 | 23 53 $\frac{1}{4}$ |
| 40 3 | 16 9 $\frac{1}{2}$ | 23 53 $\frac{1}{2}$ |

DIE 1 FEBRUARIJ.

Alt. cordis Ω per Sext. nou. 48 2 $\frac{5}{6}$
per Sext. vet. 48 2 $\frac{5}{6}$

Declin. eius per Armill. 13 58
alt. pinnacidio 13 57 $\frac{1}{2}$

N. B. Obseruationes post mediam
noctem inter nubes subinde recurrentes
factæ sunt.

DIE 3 FEBRUARIJ.

Alt. cordis Ω per Q. Tich. 48 2 50
Lucida in ceruice Ω
per Q. Tich. 55 59 40
utroque pinnacidio.

DIE 7 FEBRUARIJ.

Lucida ped. Ω 45 48 40
per Q. Tichon. 45 48 45
per Sext. nou. 45 49 $\frac{3}{4}$
Infima ceruicis Ω 52 50
per Q. Tichon. 52 50 5
Cor Ω per Q. Tich. 48 2 55
altero 48 2 45
per Sext. nouum 48 3 $\frac{1}{2}$
per Sext. veterem 48 3 $\frac{1}{4}$
Per Q. Tichonicum
Suprema ceruicis Ω 59 32 10
Luc. Ceruicis, vtroque 55 59 35
Venter Ω 45 30 35
altero 45 30 25
Inferior in Coxa Ω 51 46 45
51 46 50
Alia in femore Ω 46 45
Lucida Caudæ Ω 50 59 5

DIE 4 MARTIJ.

Prima pedis Ω 45 49
alt. pinnacid. 45 48 40
Declin. eius per Armill. 11 43 $\frac{1}{2}$
Luc. in cap. Ω per Tich. 59 43 40
Sequentis in cap. decl.
per Armillas 27 54
Infima in Ceruice per Tich. 52 50
Decl. eius per Armill. 18 44 $\frac{1}{4}$
Cor Ω per Tich. 48 2 50
Decl. eius per Armill. 13 58 $\frac{1}{8}$
alt. pinnacid. 13 57
Suprema in ceruice per Tich. 59 32 10
Lucida ceruicis per Tich. 55 59 $\frac{1}{2}$
Declin. eius per Armill. 21 53 $\frac{1}{4}$

DIE 5 MARTIJ.

Alt. Merid. nasi Ω
per Q. Volub. 62 0
Declin. per Armill. 27 54 $\frac{1}{4}$
Os Ω per Q. Volub. 58 49 $\frac{1}{2}$
Declin. per Armill. 24 44 $\frac{1}{2}$
Luc. pes Ω per Q. Tichon. 45 48 $\frac{2}{3}$
per Q. Volub. 45 48 $\frac{1}{2}$
Declin. per Armill. 11 43 $\frac{1}{2}$
Faux Ω per Q. Tich. 59 43 $\frac{2}{3}$
per Q. Volub. 59 43 $\frac{2}{3}$
Declin. per Armill. 25 38 $\frac{1}{2}$
Suprema cap. Ω per Q. Vol. 62 0 $\frac{1}{2}$
Declin. per Armill. 27 54 $\frac{1}{4}$

DIE 26 MARTIJ AD VESPERAS.

Luc. pes Ω per Q. Volub. 45 49 $\frac{1}{4}$
per Sext. nou. 45 48 $\frac{2}{3}$
Decl. per Armill. 11 43 $\frac{1}{2}$
Luc. in ore Ω per Q. Volub. 59 43 $\frac{2}{3}$
In fronte Ω per Q. Volub. 62 0 $\frac{1}{2}$
Infima in ceruice Ω
per Q. Volub. 52 49 $\frac{1}{4}$
Cor Ω per Q. Tich. 48 3
per Q. Volub. 48 2 $\frac{1}{2}$
per Sext. nou. 48 2 $\frac{1}{2}$
Decl. per Armill. 13 58
inter nubes
Luc. in ceruice per Tich. 55 59 $\frac{1}{2}$
Postea tenebrosum.

DIE 31 OCTOBRIS A. M.

| A. M. | Oculus ♀ occ. | Cor ☉ or. | Dist. æquat. |
|--------------------|---------------------|---------------------|---------------------|
| H. 5 15' | 61 40 $\frac{2}{3}$ | 21 46 $\frac{1}{2}$ | 83 27 $\frac{1}{6}$ |
| 5 18 $\frac{1}{6}$ | 62 27 $\frac{1}{4}$ | 20 59 $\frac{5}{6}$ | 83 27 5 |
| 5 25 | 64 8 | 19 18 | 83 26 |
| 5 27 $\frac{1}{2}$ | 64 50 $\frac{1}{6}$ | 18 37 $\frac{1}{3}$ | 83 27 $\frac{1}{2}$ |

DIE 7 NOUEMBRIS A. M.

Postea obseruabatur cor ☉ cum prope meridianum esset, in sua declinatione vte ea cum altitudine meridianam conferatur.

6^H 0^M 5^S transiuit cor ☉ per meridi-
Hinc verificetur anum idque in noua me-
Horologium¹ ridie j linea, habuit alt.
meridianam 48^g 4', bona.

Circa idem tempus fuit declinatio eiusdem per armillas accepta

| | |
|----------|------------------------------------|
| | vno pinnacidio 13 ^g 57 |
| | altero pinnac. 13 57 $\frac{3}{4}$ |
| 48 4 | Huius diuersitatis in de- |
| 34 5 30 | clinatione per armillas |
| 13 58 30 | & per altitudinem meri- |
| | dianam oportet rationem |
| | inuenire. |

Nos postea deprehendimus armillas non satis exacte in libella sua fuisse firmatas, ita vt vno scrupulo quasi declinationem iusto minorem in borealibus & tantum iusto maiorem in australioribus declinationibus exhiberent, quod vitium in antecedentibus cauendum et corrigendum venit, præsertim in declinationibus stellarum fixarum. In ♀ non est odus, eo quod is respectu Spicæ limitabatur in suis obseruationibus per declinationem &c.

DIE 8 NOUEMBRIS.

| | |
|-----------------------------|-------------------------|
| Circa horam 5 $\frac{5}{6}$ | Declin. cordis ☉ |
| per Armillas | vno 13 58 |
| | altero 13 57 |
| Reiterata Decl. | vno 13 58 $\frac{1}{4}$ |
| | altero 13 58 |

| | |
|-----------------------------------|----------------------------------|
| 5 ^H 57 $\frac{1}{2}$ ' | Alt. Merid. cordis ☉ |
| corr. 6 13 48 | per Q. Volub. 48 4 $\frac{1}{4}$ |
| | per Q. Mural. 48 3 0 |
| 6 24 38 corr. | Luc. ceruicis |
| | in Merid. 56 0 $\frac{1}{4}$ |
| Eiusdem Declin. vno | 21 52 $\frac{3}{4}$ |
| | altero 21 53 |

DIE 11 NOUEMBRIS.

Cum Cor ☉ esset prope merid. obseruabatur eius Declin. per Armillas
vtroque pin. 13 57 $\frac{1}{2}$

Repetita Decl. 13 57 $\frac{3}{4}$
alt. 13 57 $\frac{1}{2}$

| | |
|-------------|--|
| H. 6 1' 47" | Cor ☉ per Meridianum, |
| | Alt. per Volub., bona 58 3 $\frac{1}{2}$ |
| | Declin. ex Altitud. 13 58 |
| 6 12 40 | Transiuit media Ceruicis |
| | per Merid. habuitque Altitud. 56 0 |

Post verificatam denuo Libellam Armillarum repetebatur Declin. cordis ☉ & inuenta est 13 58
alt. pinnacid. 13 57 $\frac{5}{6}$

Atque hoc satis exacte conuenit cum ea Declinatione quæ per lineam meridianam capiebatur.

Declin. mediæ Ceruicis 21 54 $\frac{1}{2}$
alt. pinn. 21 54 $\frac{1}{6}$

Altitud. Merid. 56 0
34 5 $\frac{1}{2}$

Decl. per Alt. 21 54 $\frac{1}{2}$ bene conuenit.

Patet itaque quod hic etiam Declinatio & Altitudo Meridiana bene conueniant, & quod ambo instrumenta tam Quadrans quam Armillæ maiores recte se habeant.

Per Q. Muralem obseruabatur Cordis ☉ Altitudo ab Elia eodem tempore
vno pin. 48 3 $\frac{1}{6}$
alt. pinnacid. 48 3

Altitud. mediæ ceruicis etiam per Muralem
vno pinnacidio 55 59 $\frac{1}{2}$
altero 55 59 35

¹ Adscriptum est alia manu: Debuit transiuiſſe H. 6 18' 0'', ergo Horologium tardius 17 M. 55'' ibat.

OBSERVATIONES STELLARUM IN VIRGINE.

DIE 15 JANUARIJ.

| | | |
|-----------------------------|----|------------------|
| Alt. Merid. Vindemiatrix | | |
| per Q. Volub. | 47 | 18 |
| per Sextant. | 47 | 19 |
| Alt. Mer. Spicæ ♄ | | |
| per Q. Volub. | 25 | 8 $\frac{3}{4}$ |
| per Sext. | 25 | 9 $\frac{1}{4}$ |
| Declin. per Armillas | 8 | 55 $\frac{3}{4}$ |
| alt. pinnacidio | 8 | 56 |
| Cingulum ♄ in Meridiano | | |
| per Q. Volub. | 35 | 39 $\frac{1}{2}$ |
| per Sextant. | 35 | 40 $\frac{1}{2}$ |
| Declin. per Armillas | 1 | 33 $\frac{3}{4}$ |
| Superior pes ♄ in Merid. | | |
| per Q. Volub., incerta, | 30 | 18 |
| per Sext. Δ Nou. | 30 | 20 |
| Declin. eiusdem per Armill. | 3 | 46 |
| altero pinnacidio | 3 | 47 |

* non satis exquisite.

DIE 23 JANUARIJ A. M.

| | | | |
|--------------------------------|--------------------|------------------|----|
| Spica ♄ per Sext. nou. | 25 | 9 | 0 |
| in Meridiano per Sext. vet. | 25 | 9 | 10 |
| per Q. Tich., vtroq. | 25 | 8 $\frac{1}{2}$ | |
| Declin. eius per Arm. subterr. | 8 | 56 $\frac{1}{4}$ | |
| alt. pinnacidio | 8 | 56 $\frac{3}{4}$ | |
| Spica ♄ occ. | Luc. Vultur. | Dist. | |
| | orient. | æquat. | |
| 26 58 | 69 46 | 96 44 | } |
| 27 37 | 69 8 | 96 45 | |
| 30 36 | 66 6 | 96 42 | |
| 31 39 $\frac{1}{2}$ | 65 3 $\frac{1}{2}$ | 96 43 | |

* Fuerunt tunc Vultur & Spica in eodem Alt., quasi 22 G.

| | | |
|------------------------------|-------|-------|
| 32 58 | 63 45 | 96 43 |
| Genu ♄ in Merid. habuit Alt. | | |
| per Q. Tichon. | 35 | 38 |

DIE 24 JANUARIJ A. M.

| | | | |
|----------------------------------|----------------|------------------|-----------------|
| Alt. Spicæ | per Sext. Vet. | 25 | 9 |
| ♄ in | per Sext. Nou. | 25 | 8 $\frac{5}{6}$ |
| Merid. | per Q. Tich. | 25 | 8 $\frac{2}{3}$ |
| | alt. pinn. | 25 | 8 $\frac{1}{2}$ |
| Decl. Spicæ per Armill. subterr. | | | |
| vtroque pinn. | 8 | 56 $\frac{1}{2}$ | |

Ipso momento post declinationem Spicæ totum cælum obducebatur atris nubibus.

DIE 1 FEBRUARIJ.

| | | |
|----------------------|----|------------------|
| Spica ♄ in Meridiano | | |
| per Sext. nou. | 25 | 8 $\frac{1}{6}$ |
| per Sext. vet. | 25 | 8 $\frac{1}{3}$ |
| Declin. eius | | |
| per Armill. | 9 | 56 |
| alt pinnacid. | 9 | 57 |
| Decl. eiusdem | | |
| repetita | 9 | 57 |
| alt. pinnacid. | 9 | 56 $\frac{5}{6}$ |

plane tenebrosum
incertæ
neque erat satis ferenum

N. B. Observationes post mediam noctem inter nubes subinde recurrentes factæ sunt.

DIE 7 FEBRUARIJ.

Per Q. Tichonicum

| | | | |
|------------------------------|----|------------------|----|
| In ♄ ala | 34 | 56 | 25 |
| altero pinnacid. | 34 | 56 | 20 |
| Sequens in ala, vtroque | 39 | 46 | |
| In dorso ♄ | 47 | 18 $\frac{1}{4}$ | |
| Differ. Ascens. R. Spicæ ♄ & | | | |
| lucidæ Vulturis I | 96 | 44 | 10 |
| II | 96 | 44 | 5 |

Tunc fuit Altitudo vtriusque stellæ circiter 20 G.

Postea cum lucida Vulturis esset eleuatio & Spica haberet Altitudinem 16 $\frac{1}{4}$, inuenimus differentiam I 96 43

| | | | |
|-------------------|-----|----|------------------|
| Ascensionis rectæ | II | 96 | 42 $\frac{1}{6}$ |
| eius ab Aquila | III | 96 | 42 $\frac{1}{2}$ |

| | | | |
|----------------------|----|-----------------|----|
| Spica ♄ per Q. Tich. | 25 | 8 | 20 |
| | 25 | 8 | 30 |
| per Sext. nou. | 25 | 9 $\frac{1}{4}$ | |
| per Sext. vet. | 25 | 9 | |

| | | | |
|------------------------------------|---|------------------|----|
| Declin. per Armill. maio. subterr. | | | |
| vno pin. | 8 | 56 $\frac{5}{6}$ | |
| altero | 8 | 56 | 55 |
| Repetita, vno | 8 | 57 | |
| altero | 8 | 56 $\frac{5}{6}$ | |

| | | | |
|-----------------------|----|----|----|
| Genu ♄ per Q. Tichon, | | | |
| vtroque | 35 | 39 | 10 |

DIE 13 FEBRUARIJ.

| | | | |
|------------------------------------|----|------------------|----------------------------------|
| Media inferioris alæ \mathbb{M} | 35 | 45 | } per Sext. nouum |
| Infima in latere \mathbb{M} Bor. | 44 | 57 | |
| In ventre \mathbb{M} | 39 | 46 $\frac{1}{2}$ | |
| Præindematrix | 47 | 18 $\frac{1}{4}$ | |
| Spica \mathbb{M} per Q. Tich. | 25 | 8 | 20 vet. pinn. 25 8 40 nou. |
| per Sext. nou. | 25 | 9 | |
| Declin. eius per Armill. | 8 | 56 $\frac{2}{3}$ | |
| alt. pinnacid. | 8 | 56 $\frac{1}{2}$ | |
| Media in fyrmate \mathbb{M} | 30 | 16 $\frac{3}{4}$ | } per Sext. nou. |
| Extrema Bor. pedis \mathbb{M} | 37 | 47 $\frac{3}{4}$ | |

DIE 29 OCTOBRIS.

Obseruauimus Spicam propter γ^1 .

DIE 31 OCTOBRIS.

Postea Spicam obseruauimus per Armillas æquatorias propter γ^1 .

DIE 15 DECEMBRIS.

Maius horologium nondum erat satis correctum.

Per minus H. 6 29 36 } transiit ex-
Per maius 6 29 43 } acie Spica per
Meridianum habuitque Altitud.

Spica per Meridian. in altitudine
maxima per Q. Muralem 25 8
H. 6 M. 35 fere.

Declin. per Armill. maiores

vno 8 57 $\frac{1}{2}$

altero 8 57 $\frac{1}{4}$

Nota. Declin. Spicæ satis bene con-
uenit cum Murali, sed differt a Q.
Volub. quasi 40".

DIE 26 DECEMBRIS.

Dift. Spicæ & cordis Ω 54 1 $\frac{1}{2}$
54 1
54 1 $\frac{1}{2}$

Sed fieri potest quod ob refractionem
hoc fiebat, erat enim Spica de-
cliuis.

DIE 31 DECEMBRIS A. M.

Dift. inter Spicam \mathbb{M} I 54 1
& Cor Ω II 54 1 $\frac{1}{2}$
III 54 1

OBSERUATIONES STELLARUM IN LIBRA.

DIE 15 JANUARIJ.

Meridionalis Lanx Ω
per Q. Volub. 19 51 $\frac{1}{2}$
per Sext. Δ 19 52 $\frac{3}{4}$
Declin. eiusdem per Armill. 14 14 $\frac{1}{3}$
altero pinnacid. 14 14

DIE 23 JANUARIJ.

Merid. lanx Ω in Merid.
per Sext. vet. 19 53 $\frac{1}{4}$
per Sext. nou. 19 52 $\frac{1}{2}$
per Q. Tichon. vno 19 52 $\frac{1}{3}$
altero 19 52 $\frac{1}{4}$
Declin. eiusdem per Armill. 14 13 $\frac{1}{2}$
altero pinnacid. 14 13 $\frac{3}{4}$
Bor. lanx Ω per Sext. nou. 26 19 $\frac{1}{2}$
in Merid. per Sext. vet. 26 20
per Q. Tichon., vtroque 26 19

DIE 1 FEBRUARIJ.

Merid. lanx per Sext. vtrumque inter
recurrentes nubes 19 52
Declin. per Armillas 14 12 $\frac{1}{2}$
uno.

DIE 7 FEBRUARIJ.

Alt. Merid. lancis Ω Bor.
per Q. Tichon. vno pin. 26 18 55
altero 26 19
per Sext. nou. 26 19 $\frac{3}{4}$
per Sext. vet. 26 19 $\frac{3}{4}$

DIE 13 FEBRUARIJ.

Australis per Q. Tichon. 19 51 15
lanx Ω alt. pinnacid. 19 51 25
per Sext. nou. 19 52 $\frac{2}{3}$
Borealis per Q. Tichon. 26 18 40
lanx Ω alt. pinnacid. 26 18 55
per Sext. nou. 26 19 $\frac{1}{2}$

¹ Cf. supra pp. 78 et 80 inter observationes Mercurii.

OBSERVATIONES STELLARUM IN CAPRICORNO.

DIE 22 SEPTEMBRIS.

| | |
|--|------------------|
| Altit. Merid. superioris | |
| cornu γ 20 | 21 $\frac{1}{2}$ |
| non satis certa | |
| inferioris cornu γ 18 | 6 |
| Dist. inter lucidam Vulturis & lucidam | |
| caudæ γ per | I 38 4 |
| Sext. Δ veterem | II 38 4 |

DIE 23 SEPTEMBRIS.

| | | |
|--------------------------|----|------------------|
| Superius cornu γ | 20 | 22 $\frac{3}{4}$ |
| Inferius cornu γ | 18 | 6 $\frac{1}{8}$ |
| Præcedens caudæ γ | | |
| per Volub. | 15 | 39 $\frac{1}{2}$ |
| Declin. per Armillas | 18 | 25 $\frac{1}{2}$ |
| Sequens caudæ γ | 16 | 10 $\frac{1}{4}$ |
| Declin. sequ. caudæ | 17 | 54 $\frac{1}{2}$ |

DIE 31 OCTOBRIS.

Ad Vesperas¹

| | | |
|-----------------------------------|----|---------------------|
| Declin. superioris cornu γ | 13 | 40 $\frac{1}{2}$ M. |
| Declin. inferioris cornu γ | 15 | 58 $\frac{1}{2}$ M. |

| Lucida γ ad ort. | Superius cornu γ ad occas. | Dist. æquat. |
|----------------------------|--------------------------------------|---------------------|
| 58 21 $\frac{1}{4}$ | 28 59 | 87 20 $\frac{1}{4}$ |
| 57 37 $\frac{1}{2}$ | 29 39 $\frac{1}{2}$ | 87 17 |
| 56 58 | 30 20 $\frac{1}{2}$ | 87 18 $\frac{1}{2}$ |
| 56 20 $\frac{1}{2}$ | 30 56 $\frac{1}{2}$ | 87 17 |

Pone itaque differentiam ascensionalem 87 18.

DIE 1 NOUEMBRIS.

| | | |
|-------------------------------------|----|---------------------|
| Declin. inferioris cornu γ | 15 | 58 $\frac{1}{2}$ M. |
| Dist. æquat. inter lucidam γ | | |
| et inferius cornu γ | 86 | 36 |
| Eadem reiterata | 86 | 36 |

DIE 16 NOUEMBRIS.

| | | |
|---|----|------------------|
| Declin. inferioris cornu γ | 15 | 59 |
| Dist. æquat. eius a lucid. γ or. | 86 | 33 $\frac{1}{4}$ |
| Declin. eiusdem | 15 | 58 |
| Dist. æquat. eiusdem a luc. γ | 86 | 35 |
| Declin. inferior. cornu γ | 15 | 58 $\frac{3}{4}$ |
| Dist. a lucida γ or. | 86 | 35 |
| Declin. eiusdem M. | 15 | 58 $\frac{3}{4}$ |
| Dist. a lucida γ or. | 86 | 34 |

OBSERVATIONES STELLARUM IN AQUARIO.

DIE 22 SEPTEMBRIS.

| | | |
|--------------------|--------|-----------------|
| Inter Lucidam Vul- | I 29 | 0 $\frac{1}{4}$ |
| turis & sinistrum | II 29 | 0 $\frac{2}{3}$ |
| humerum \approx | III 29 | 0 $\frac{1}{4}$ |
| alias | 28 | 59 |

DIE 23 SEPTEMBRIS.

| | | |
|----------------------------|----|------------------|
| Sinister humerus \approx | | |
| per Volub. | 26 | 46 |
| Dexter humerus \approx | | |
| Alt. Merid. | 31 | 49 $\frac{1}{3}$ |
| Declin. dextri humeri | | |
| per Armillas | 2 | 15 |
| alt. pinn. | 2 | 15 $\frac{1}{6}$ |

Postea denuo rectificabantur armillæ.

DIE 27 SEPTEMBRIS.

| | | |
|-------------------------------------|----|------------------|
| Alt. Mer. sinistri humeri \approx | 26 | 46 $\frac{1}{3}$ |
| Declin. ex Alt. Merid. | 7 | 19 $\frac{1}{3}$ |
| Declin. per Armill. | 7 | 19 |
| Non fuit satis ferenum. | | |

DIE 30 SEPTEMBRIS.

| | | |
|---------------------------------------|----|------------------|
| Alt. sinistri humeri \approx Merid. | | |
| per Volub. | 26 | 45 $\frac{1}{3}$ |
| Declin. eiusdem | | |
| per Armill. | 7 | 19 $\frac{1}{4}$ |
| altero | 7 | 19 |

¹ Adscriptum est manu Tychoonis ad summam paginam: Cfr. *Stellas in Cometa*. Cf. T. IV p. 36 nostræ editionis.

DIE 31 OCTOBRIS.

Sinister humerus ∞

| <i>Lucida</i> ∇ or. | <i>Sinister humerus</i> ∞ occ. | <i>Diff. Ascen-</i> <i>sionalis</i> |
|------------------------|-----------------------------------|--|
| 52 16 $\frac{1}{4}$ | 16 21 $\frac{1}{2}$ | 68 38 $\frac{1}{4}$ |
| 51 44 $\frac{1}{2}$ | 16 53 | 68 37 $\frac{1}{2}$ |
| 51 18 $\frac{1}{2}$ | 17 16 | 68 34 $\frac{1}{2}$ |
| 50 54 $\frac{1}{2}$ | 17 42 $\frac{1}{2}$ | 68 37 |
| 50 14 $\frac{1}{2}$ | 18 21 $\frac{1}{2}$ | 68 36 |
| 49 11 | 19 23 $\frac{1}{2}$ | 68 34 $\frac{1}{2}$ |

Pone differentiam

ascensionalem 68 37

Dexter humerus ∞

| <i>Lucida</i> ∇ or. | <i>Dexter humerus</i> ∞ occ. | <i>Diff. Ascen-</i> <i>sionalis</i> |
|------------------------|---------------------------------|--|
| 47 39 $\frac{1}{2}$ | 12 12 | 59 51 $\frac{1}{2}$ |
| 46 53 $\frac{1}{2}$ | 12 59 $\frac{1}{2}$ | 59 53 |
| 45 52 | 14 2 $\frac{1}{2}$ | 59 54 $\frac{1}{2}$ |
| 45 3 $\frac{1}{2}$ | 14 50 $\frac{1}{2}$ | 59 53 40 |
| 44 37 $\frac{1}{4}$ | 15 18 | 59 55 $\frac{1}{4}$ |
| 43 22 $\frac{1}{2}$ | 16 31 40 | 59 54 $\frac{1}{2}$ |

Pone differentiam

Ascensional. 59 54

Declin. humeri dextri 2 16 Mer.

DIE 1 NOUEMBRIS.

Declin. sinistrae manus ∞ lucidæ

10 55 $\frac{1}{2}$ M.

Declin. sinistri humeri ∞

7 19 $\frac{1}{4}$ M.

Declin. dextri humeri ∞

2 16 M.

Sinister humerus ∞

| <i>Lucida</i> Vul- turis occid. | <i>Sinist.</i> hum. occid. | <i>Differ.</i> ascenf. |
|-------------------------------------|-------------------------------|---------------------------|
| 37 46 $\frac{1}{3}$ | 13 0 $\frac{1}{3}$ | 24 45 30 |
| 38 22 | 13 37 $\frac{1}{2}$ | 24 44 30 |
| 7 ^H 0 ^M 38 59 | 14 14 $\frac{1}{2}$ | 24 44 $\frac{1}{2}$ |

Pone distantiam

æquatoriam 24 45

| | <i>Dext. hum.</i> occid. | | |
|------|-----------------------------|--------------------|---------------------|
| 7 3 | 39 40 | 6 13 $\frac{1}{2}$ | 33 26 $\frac{1}{2}$ |
| 7 6 | 40 15 $\frac{1}{2}$ | 6 47 $\frac{1}{4}$ | 33 28 $\frac{1}{4}$ |
| 7 8 | 40 45 | 7 15 | 33 30 |
| 7 10 | 41 14 $\frac{1}{2}$ | 7 46 | 33 28 $\frac{1}{2}$ |
| 7 12 | 41 44 $\frac{3}{4}$ | 8 18 | 33 26 $\frac{3}{4}$ |

Dext. hum. occid.

| | | | |
|------|---------------------|--------------------|---------------------|
| 7 16 | 42 33 $\frac{1}{2}$ | 9 4 | 33 29 $\frac{1}{2}$ |
| 7 20 | 43 43 $\frac{1}{2}$ | 10 4 $\frac{1}{2}$ | 33 29 |

Pone differentiam

ascensionalem 33 28

DIE 6 NOUEMBRIS.

Declin. sinistri hum. ∞ 7 17 M.

Repetita Declin. eiusdem 7 17 $\frac{1}{2}$

Declin. hum. ∞ dextri 2 15 M.

Repetita decl. dext. hum. 2 15

DIE 17 NOUEMBRIS.

Manus ∞

| <i>Lucida</i> Vult. occ. | <i>Lucida sinistrae</i> manus ∞ occ. | <i>Different.</i> Ascenf. |
|-----------------------------|---|------------------------------|
| 38 45 | 25 6 $\frac{1}{2}$ | 13 38 $\frac{1}{2}$ |
| 39 14 | 25 34 | 13 40 |
| 39 40 | 26 1 $\frac{3}{4}$ | 13 38 $\frac{1}{4}$ |
| 40 1 $\frac{1}{2}$ | 26 23 | 13 38 $\frac{1}{2}$ |

Pone differentiam Ascenf. R. Lucidæ
in sinistra manu ∞ a Vulture 13 38 $\frac{1}{2}$

Eadem a Lucida ∇

| <i>Luc. manus</i> ∞ occ. | <i>Lucida</i> ∇ orient. | <i>Diff.</i> æquat. |
|-----------------------------|----------------------------|-----------------------------|
| 27 24 | 52 15 $\frac{1}{4}$ | 79 39 $\frac{1}{4}$ |
| 27 56 $\frac{1}{3}$ | 51 44 | 79 40 $\frac{1}{3}$ |
| 28 30 | 51 15 $\frac{1}{2}$ | 79 45 $\frac{1}{2}$ incerta |
| 28 49 | 50 52 | 79 41 |
| 29 17 | 50 24 | 79 41 |

Pone differentiam Asc.

a lucida ∇ 79 40 $\frac{1}{2}$

Declin. Lucidæ

manus ∞ 10 53 $\frac{1}{2}$

DIE 23 NOUEMBRIS.

Obseruabantur per interualla inter
H. 6 & 8 aliquot fixarum loca per Ar-
millas Zodiacales.

| | |
|-------------------------|------------------------|
| Pofita ∇ Lucida in | 1° 55' ∇ |
| obferuatus est | I 17 44 ∞ |
| Sinistri hume- | II 17 44 $\frac{1}{2}$ |
| ri ∞ locus in | III 17 44 |
| Pofito loco Lucid. ∇ in | 1 55 ∇ |
| Dexter humerus | 27 41 $\frac{1}{4}$ ∞ |
| ∞ obferuabatur in | 27 42 |
| | 27 42 |

OBSERVATIONES STELLARUM IN PISCIBUS.

DIE 1 NOUEMBRIS.

Mandibula χ

| | Mandibula χ Auf. occ. | Lucida γ or. | Dift. æquat. |
|------------|-------------------------------|------------------------|--------------------|
| H. 9 M. 41 | 28 15 $\frac{1}{2}$ | 13 44 $\frac{1}{2}$ | 42 0 |
| 9 46 | 29 7 $\frac{1}{4}$ | 12 54 $\frac{1}{2}$ | 42 1 $\frac{3}{4}$ |
| 9 49 | 29 41 $\frac{1}{2}$ | 12 20 $\frac{1}{2}$ | 42 2 |
| 9 51 | 30 15 | 11 46 $\frac{1}{2}$ | 42 1 $\frac{1}{2}$ |

Caput χ Caput χ occ.

| | | | |
|------|---------------------|--------------------|---------------------|
| 9 59 | 29 25 $\frac{1}{4}$ | 9 46 $\frac{1}{2}$ | 39 11 $\frac{3}{4}$ |
| 10 2 | 30 3 $\frac{3}{4}$ | 9 4 $\frac{3}{4}$ | 39 8 $\frac{1}{2}$ |
| 10 5 | 30 55 $\frac{1}{4}$ | 8 18 | 39 13 $\frac{1}{4}$ |

Hæc differentia non satis certa propter trabem.

Pectus χ Pectus χ occid.

| | | | |
|-------|---------------------|--------------------|---------------------|
| 10 13 | 33 9 $\frac{1}{2}$ | 6 26 $\frac{1}{2}$ | 39 35 $\frac{3}{4}$ |
| 10 15 | 33 46 | 5 48 $\frac{5}{8}$ | 39 34 $\frac{1}{8}$ |
| 10 20 | 34 50 $\frac{3}{4}$ | 4 44 $\frac{1}{2}$ | 39 35 $\frac{1}{4}$ |

Pone distantiam æquatoriam 39 35

DIE 6 NOUEMBRIS.

Os χ occ.Lucida γ
occid.

| | | |
|---------------------|--------------------|-------|
| 49 39 $\frac{1}{2}$ | 4 21 $\frac{1}{2}$ | 45 18 |
| 50 30 | 5 13 | 45 17 |
| 51 4 $\frac{3}{4}$ | 5 46 $\frac{3}{4}$ | 45 18 |

Pone hanc Differ. Asc. 45 17 $\frac{2}{3}$

Mandibula χ Mandibula χ occ.

| | | |
|---------------------|--------------------|--------------------|
| 48 31 $\frac{1}{4}$ | 6 28 | 42 3 $\frac{1}{4}$ |
| 49 30 | 7 26 | 42 4 |
| 49 55 | 7 50 $\frac{1}{2}$ | 42 4 $\frac{1}{2}$ |

Pone distant. æquat. 42 4

Caput χ Caput χ occ.

| | | |
|---------------------|---------------------|---------------------|
| 47 59 $\frac{3}{4}$ | 8 44 | 39 15 $\frac{3}{4}$ |
| 48 50 | 9 34 | 39 16 |
| 49 26 $\frac{1}{2}$ | 10 13 $\frac{1}{2}$ | 39 13 |
| 51 5 $\frac{3}{4}$ | 11 50 | 39 15 $\frac{3}{4}$ |
| 51 50 $\frac{1}{2}$ | 12 37 | 39 13 $\frac{1}{2}$ |

Pone hic 39 14

Pectus χ Pectus χ occ.

| | | |
|-------|---------------------|---------------------|
| 53 27 | 13 51 $\frac{1}{2}$ | 39 35 $\frac{1}{2}$ |
| 54 41 | 15 5 $\frac{1}{2}$ | 39 35 $\frac{1}{2}$ |

Distantia æquatoria 39 35 $\frac{1}{2}$ Declinatio oris χ B. 1 39 $\frac{1}{2}$ Declin. Mandibulæ χ B. 1 6

repete

Declin. capitis χ B. 4 8 $\frac{3}{4}$ Declin. pectoris χ M. 0 55 $\frac{1}{2}$ Declin. dorsi χ B. 3 27Declin. Ventris χ M. 0 25 $\frac{1}{2}$ OBSERVATIONES STELLARUM IN ASTERISMIS
BOREALIBUS EXTRA ZODIACUM.

DIE 13 JANUARIJ.

Per Q. Volub. Alt. Merid.

sinistri pedis Andromedæ 74 22 $\frac{1}{3}$

supremæ in Triangulo 67 3

post correctâ pinnacidia et centrum
Quadrantis revifum & redintegratum.Cum versus occalum eßet Lucida
humeri Cephei circa horam Sextam
[Decl.] 60 53 $\frac{2}{3}$

Supremæ in Cathedra

declin. 56 53

altero pinnacid. 56 53 $\frac{1}{2}$

Altit. minima Lucidæ

in \square Vrsæ minoris 41 44 $\frac{1}{2}$ sed dubium est an fuerit exquifite in
Meridiano.Altera in Vrsæ 39 12 $\frac{1}{4}$

reiterata 39 12

*Declin. eiusdem per Armillas
vtroque pinnacid. 73 21¹*

| | |
|---------------------|---------------|
| 55 54 $\frac{1}{2}$ | 16 39 |
| 39 12 | 16 42 |
| 16 42 $\frac{1}{2}$ | Differentia 3 |

Alt. Merid. Lucidæ in infer.

pede Persei 64 39

Lucidus pes Erichtonij per Q. 62 13 $\frac{5}{6}$

DIE 14 JANUARIJ.

Lucida in □ Vrsæ min. 41 45 $\frac{1}{3}$

Deinde rursus exacte 41 45

Reiterata 41 45

Reiterata bona 41 44 $\frac{3}{4}$

Declin. eiusdem per Armill. 75 51

altero pinnac. 75 51 $\frac{1}{4}$

differentia est $\frac{1}{2}$ ²

Declin. sequentis in □ Vrsæ

minoris, vno pinn. 73 20 $\frac{3}{4}$

altero 73 20 $\frac{1}{4}$

Alt. eiusdem per Q. in Mer. 39 11 45

Declin. ex Altitud. 73 17 15

Differentia est scrupulorum 3

DIE 15 JANUARIJ.

Alt. Merid. capitis Medusæ

per Q. 73 22 $\frac{1}{2}$

Declin. per Armillas, vno 39 17 $\frac{1}{2}$

altero pinnacid. 39 17 $\frac{3}{4}$

Alt. Merid. lateris Persei

per Quad. 82 24 $\frac{1}{4}$

Lucida □ Vrsæ

minoris vno 75 51

per Armill. alt. pinn. 75 51 $\frac{1}{2}$

Altera in Vrsæ minore 39 12 10

Decl. per Armillas

vtroque pin. 73 18 30

Superior pes Ericht. in Merid.

per Q. Portat. 66 30 $\frac{1}{6}$

Decl. eiusdem per Armill.

vtroque 32 25

Hædorum inferior in Merid. 74 40

Capella in Merid.

per Q. Volub. 79 33

Ceruix Canis min.

per Q. Volub. 43 9

per Sext. Δ 43 10

Declin. per Armill., vno 9 3 $\frac{1}{2}$

altero 9 3 $\frac{1}{4}$

Canis minor per Q. Volub. 40 19

per Sext. Δ 40 19 $\frac{3}{4}$

Decl. per Armillas, vno 6 13 $\frac{1}{2}$

altero 6 13 $\frac{1}{4}$

Declin. extremæ caudæ 51 24 $\frac{1}{4}$

vrsæ maioris alt. pinn. 51 24

Alt. Lucid. humeri Cephei in

Merid. per Q. Volub. 26 49

Declin. eius vtroque

pinn. Armill. 60 53

*Versus occalum erat eadem decli-
natio 60 51 $\frac{1}{2}$, reiterata 60 52 $\frac{1}{2}$*

Itaque dimidio scrupulo Armillæ.

Altit. Lucidæ in cingulo Cephei

per Q. Volub. 35 41 $\frac{1}{6}$

Declin. eiusdem per Armill. 68 47

alt. pinnacid. 68 46 $\frac{1}{4}$

Altit. minima Schedir Castiopeæ

per Q. Volub. 20 12 $\frac{1}{2}$

Alt. min. stellæ Polaris

per Volub. 52 59 $\frac{1}{2}$

Alt. maxima extremæ in Cauda vrsæ

maioris per Q. Volub. 85 30

Flexura Bootis in Mer.

per Volub. 54 37

Declin. eiusdem per Armill. 20 31

alt. pinnacid. 20 31 $\frac{1}{4}$

Alt. Arcturi Merid. per Volub. 55 28 $\frac{1}{2}$

Declin. eiusdem per Armill. 21 23 $\frac{1}{4}$

alt. pinnacid. 21 23 $\frac{3}{8}$

Sinist. hum. Bootis in Mer.

per Q. Volub. 74 10 incerta

Decl. eiusdem

per Armill. 40 9

alt. pinnacid. 40 9 } bonæ

Decl. lucidi hum. Cephei 60 52 $\frac{1}{4}$

per Armillas, vnico tantum pinna-

cidio propter trabem, cum a polo

ad ortum distaret.

Altit. maxima Lucidæ in □ Vrsæ mi-

noris per Q. Volub. 70 3 30

Declin. per Armillas 75 50 $\frac{1}{2}$

alt. pinnacid. 75 49 $\frac{1}{4}$

¹ Adscriptum est in codice V.: »Hæc obseruatio facta est pro collatione instrumentorum«.

² Sic in codice C.

| | |
|-----------------------|-----------------|
| Infra | Supra |
| polum 75 51 | polum 75 50 10 |
| 75 51½ | 75 49 45 |
| medium 75 51½ | medium 75 49 58 |
| Horum medium 75 50 36 | |

Vera itaque declinatio eius quæ est infra polum in \square Lucida Vrfæ minoris debet vesperi esse 70° 50' 40" & supra polum eodem modo. Debet itaque axis instrumenti ita attolli vt declinationem præbeat 70° 50' 40" quantum ad has obseruationes attinet.

DIE 16 JANUARIJ.

Altit. sequentis in \square Vrfæ 39 12½

Declin. vno pinnacid. 73 19½

Lucida in \square Vrfæ versus ortum

I pinn. 75 50 40

II pinn. 75 50 30

Hinc poterit videri an instrumentum stet quo ad axim in plano æquatoris. Altera minor in simili situ,

vno 73 18½

alt. 73 18½

Reiterata prioris 75 51

alt. pinnacid. 75 50½

Denuo ipsemet cum Helia obseruauit.

Reiterata 75 50½

Denuo reiterata, eodem pinn. 75 50½

alt. pinnacid. 75 50

Patet itaque quod armill. non sint exacte in plano meridiani quo ad axim deficientibus quasi 40" vel ½ scrupulo.

Deberet itaque inferior axis parum versus occasum trudi ½ scrupulo, sed reclamitat obseruatio Lucidæ Cephei, quæ requirit vt versus ortum trahatur tantundem. Fieri itaque potest, vt satis bene se habeat, consentiente declinatione superioris II versus ortum 32 42½ qualem etiam dat fere declinatio ex altitudine 66 48.

Sequitur examinatio antecedentium obseruationum die 15

& 16 factarum.

Die 15 Januarij post denuo reſtituta pinnacidia Armillarum subterranearum.

¹ Cf. supra p. 88.

² Sic in codice C.

De ea quæ ad caput \vee facta est¹ non sum satis certus. In altitudine 55 34 siquidem crepusculum vespertinum adhuc lucebat, quod si ea vera sit, armillæ dant declinationem 21 28 vtroque pinnacidio, altitudo vero dat 21 28½, dimidio scrupulo plus. Si itaque polus attollatur ¼ erit declinatio 21 28½ & talis etiam fiet per altitudinem quadrantis.

Lucida humeri Cephej versus occasum in declinatione 60 52½, quia postea cum esset in meridiano obseruabatur habere 60 53, indicio est axem superiorem armillarum debere quasi dimidio scrupulo versus occasum tendi, vel inferiorem versus ortum. Sed hoc nondum satis probat nisi plura acceperint.

Caput Medusæ per quadrantem portatilem

73 22½

34 5 30

39 17 0

armillæ dabant 39 17 40

differentia 0 0 40

73 22 30

39 17 55

34 5 15

39 17 15

39 17 15

diff. 30²

Hæc obseruatio non satis conuenit, quamcunque acceperis poli altitudinem. Est enim vtroque differentia ½ scrupulj.

DIE 21 JANUARIJ.

Lucida capitis Medusæ

in Meridiano 50 37½

Canis minor in Meridiano

per Q. Tichon., vtroque pinn. 40 19

Lucida ex duabus præcedentibus in \square Vrfæ maioris (cum a polo versus ortum distarent) declinationem habuit per Armillas subterr. 63 57½

alt. pinnacid. 63 57½

Sequens duarum præcedentium eisdem (a polo versus ortum) declin. habuit 58 35

alt. pinnacid. 58 35½

DIE 22 JANUARIJ.

Lucid. ☐ *Vrfæ vno pinnac.* 75 51
per subterr. Armillas.
Alt. sequentis per Sext. nou. 39 13 $\frac{3}{4}$

Pro situ Armillarum
Declinationes.

| | | | |
|--|----|------------------|-------------------------------|
| Lucida Cathedræ | | | |
| Caßiopeæ | 56 | 52 $\frac{1}{2}$ | } oc- ci- den- tales |
| alt. pinnacid. | 56 | 51 $\frac{1}{2}$ | |
| Schedir Caßiopeæ | 54 | 16 0 | |
| alt. pinnacid. | 54 | 15 10 | |
| Repetita Schedir declinatio | 54 | 16 | |
| alt. pinnacid. | 54 | 15 $\frac{1}{4}$ | |
| Suprema Cathedræ repetita | 56 | 52 $\frac{2}{3}$ | |
| alt. pinnacid. | 56 | 51 $\frac{1}{2}$ | |
| Distabant hæ duæ a polo ad occasum. | | | |
| Inferior præcedentium in ☐ <i>vrfæ</i> maioris, a polo ad ortum | 58 | 35 $\frac{1}{6}$ | |
| alt. pinn. | 58 | 35 | |
| Repetita eiusdem declin. | 58 | 35 0 | |
| alt. pinnac. | 58 | 35 | |
| Declin. Lucidæ in ☐ <i>Vrfæ</i> minoris per Armill. subterr. maiores | 75 | 51 $\frac{1}{3}$ | |
| alt. pinnacid. | 75 | 51 | |
| distabat tunc a polo ad ortum. | | | |

DIE 23 JANUARIJ A. M.

Pro situ instrumenti

Declin. inferioris præcedentium duarum in ☐ *vrfæ* maioris cum a polo ad occasum eßet 58 34 45
 alt. pinnacid. 58 34 50
 Repetita eadem 58 34 $\frac{3}{4}$

Ergo polus deberet versus ortum, erant præcile 58 35, differ. quartæ partis vnius Minuti pene insensibilis, quare 7 secundis saltem variat axis a plano Meridie.

Declin. Supremæ in Cathedra
 Caßiopeæ 56 53
 alt. pinnacid. 56 53 $\frac{1}{4}$
 a polo *versus occasum*¹.

Ergo axis poli deberet aliquantum versus ortum.

| | Occid. | Orient. |
|---------------------|---------------------|---------------------|
| Cathedra Caßiopeæ | 56 52 $\frac{3}{8}$ | 56 53 |
| | 56 51 $\frac{1}{2}$ | 56 53 $\frac{1}{4}$ |
| Inferior est in ☐ | 58 34 $\frac{3}{4}$ | 58 35 |
| <i>vrfæ</i> maioris | 58 34 50 | 58 35 $\frac{1}{6}$ |

Patet itaque quod vtroque paululum versus ortum debeat superior axis & inferior versus occasum, sed pene insensibiliter vix quarta parte vnius minuti [vel ad summum vna tertia parte]².

Altitudines Meridianæ hac eadem nocte per Q. Tichon observatæ.

| | | |
|--------------------------|----|------------------|
| Sequens in planta Perfej | 64 | 40 $\frac{1}{4}$ |
| alt. pinnacidio | 64 | 40 |
| Sinister pes Erichtonij | 66 | 30 $\frac{2}{3}$ |
| altero pinnacidio | 66 | 30 $\frac{3}{4}$ |
| Flexura Bootis | 54 | 36 $\frac{1}{3}$ |
| altero pinnacidio | 54 | 36 $\frac{1}{2}$ |
| Arcturus in Meridiano | | |
| vtroque pinnacidio | 55 | 28 $\frac{1}{3}$ |
| Dexter humerus Bootis | 62 | 57 $\frac{2}{3}$ |
| altero pinnacidio | 62 | 57 $\frac{3}{4}$ |
| Lucida Coronæ Gnosifæ | 62 | 16 |
| altero pinnacidio | 62 | 15 $\frac{5}{6}$ |

DIE 1 FEBRUARIJ.

Lucida anteriorum vrfæ minoris cum non longe abeßet a Meridiano infra polum habuit altitudinem 75 51 vno pinnacidio, altero videre non licuit.

Inf. ☐ *vrfæ* maioris 58 35 0 } *versus*
 altero 58 35 5 } *ortum*
 Cathedra Caßiopeæ 56 52 } *versus*
 altero 56 51 $\frac{2}{3}$ } *occasum*

Ceruix Canis min.
 per Sext. veter. 43 7

Præcedens in Cane minori
 per Q. Tichon. 43 8 $\frac{1}{2}$
 Canis minor per Q. Tichon. 40 18 $\frac{2}{3}$
 per Sext. nouum 40 19
 per Sext. veter. 40 18 $\frac{3}{4}$

Declin. eius per Armillas 6 13 $\frac{1}{6}$
 altero pinnacidio 6 13

Repetita vtroque pinnac. 6 13

¹ Tycho verba observatoris »ad ortum« in *versus occasum* correxit.

² Lineis inducta.

Alt. Merid. minima lucidæ
 in humero Cephej 26 49
 Alt. minima lucidæ in Baltheo
 Cephej per Sext. nouum 34 42 $\frac{3}{4}$
 Decl. Lucid. in humero
 Cephej per Armill.,
 vtroque pinn. 60 54 $\frac{1}{4}$
 Decl. Lucidæ in Baltheo
 Cephej vtroque pinnac. 68 48
 Decl. inferioris præcedentium
 in \square vrfæ maioris cum a
 polo ad occasum distaret,
 vno pinn. 58 35
 altero 58 34 $\frac{3}{4}$
 sed nondum erat in æquilibrio.
 (*Infenfibiliter differt a vero*)
 Lucidæ in \square vrfæ maioris
 declin., vno 75 51
 altero pinn. 75 50 $\frac{1}{4}$
 Non procul a maxima altitudine
 aberat.

DIE 3 FEBRUARIJ.

Ceruix Canis min., vtroque 43 8 20
 per Sext. nou. 43 9
 per Sext. veterem 43 8 $\frac{5}{6}$
 erat tunc melius ad merid. collocatus.
 Declin. vtroque pinn. 9 3 $\frac{1}{2}$
 Canis minor per Q. Tichon. 40 17 55
 altero 40 18
 per Sext. nou. 40 19 $\frac{1}{6}$
 per Sext. veterem 40 19
 Declin. vno pinn. 6 13
 altero 6 13 $\frac{1}{2}$

Pro stellis Caßiopeæ ex oculo γ

| | | | |
|------------------|--------------------|---------------------|---------|
| Per Armillas. | Differ. | | Declin. |
| | Afc. R. | | |
| Flexura Caßiopeæ | 54 46 | 58 27 $\frac{3}{4}$ | |
| Repetita | 54 46 | 58 27 $\frac{5}{6}$ | |
| Genu Caßiopeæ | 48 1 $\frac{1}{2}$ | 58 3 $\frac{1}{2}$ | |
| Repetita | 48 1 $\frac{1}{2}$ | 58 3 $\frac{1}{2}$ | |

DIE 7 FEBRUARIJ.

Alt. Merid. finift. pedis Ericht.
 per Q. Tichon., vno pinn. 66 30 0
 altero 66 30 5
 Ceruix can. min. vno 43 8
 per Q. Tich. altero 43 8 5
 per Sext. nou. 43 9 $\frac{1}{4}$
 per Sext. veter. 43 9 0

Canis minor.

per Q. Tich. vtroq. 40 17 $\frac{2}{3}$
 per Sext. nou. 40 19
 per Sext. vet. 40 19 $\frac{1}{6}$
 Crus Bootis per Q. Tich. 54 36 40
 54 36 45
 Arcturus per Q. Tich. 55 27 55
 55 28 0

*Stellarum Caßiopeæ Declinationes*¹

| | | |
|-------------------------|--------------------------|--------|
| <i>Flexura Caßiopeæ</i> | I 58 27 $\frac{3}{4}$ | |
| | II 58 27 $\frac{5}{6}$ | |
| | Pone 58 28 | |
| <i>Genu Caßiopeæ</i> | I 58 3 $\frac{1}{2}$ | |
| | II 58 3 $\frac{1}{2}$ | |
| | Pone 58 4 | |
| <i>Schedir Caßiopeæ</i> | I 54 16 $\frac{1}{4}$ | |
| | II 54 16 $\frac{1}{2}$ | |
| | III 54 16 $\frac{1}{2}$ | } bonæ |
| | Pone 54 16 $\frac{1}{2}$ | |
| <i>Caput Caßiopeæ</i> | I 51 37 $\frac{1}{2}$ | |
| | II 51 37 $\frac{1}{2}$ | |
| <i>Suprema Cathedræ</i> | I 56 53 $\frac{1}{2}$ | |
| | II 56 53 $\frac{2}{3}$ | |
| Diff. Afc. R. | I 65 56 $\frac{1}{2}$ | |
| ab oculo γ | II 65 56 $\frac{1}{2}$ | |
| <i>Stella in tibijs</i> | | |
| | Caßiopeæ I 61 37 | |
| | II 61 37 | |
| <i>Pectus Caßiopeæ,</i> | | |
| Decl. | 55 38 | |
| | II 55 38 $\frac{1}{2}$ | |

DIE 13 FEBRUARIJ.

Distantiæ Stellarum Caßiopeæ
per Sextantem Δ .

| | |
|-------------------------------|------------------------|
| <i>Suprema Cathedræ Caßi-</i> | I 4 57 $\frac{1}{2}$ |
| <i>opeæ & Schedir</i> | II 4 57 $\frac{1}{2}$ |
| <i>Suprema Cathedræ</i> | I 6 31 |
| <i>& Caput</i> | II 6 31 |
| <i>Suprema Cathedræ</i> | I 5 18 $\frac{1}{4}$ |
| <i>& Cingulum</i> | II 5 18 $\frac{1}{4}$ |
| <i>Suprema Cathedræ</i> | I 6 9 $\frac{1}{2}$ |
| <i>& Flexura</i> | II 6 10 |
| <i>Suprema Cathedræ</i> | I 9 41 $\frac{1}{4}$ |
| <i>& Genu</i> | II 9 41 $\frac{1}{4}$ |
| <i>Suprema Cathedræ</i> | I 13 15 |
| <i>& lucidus pes</i> | II 13 14 $\frac{2}{3}$ |
| <i>Suprema Cathedræ</i> | I 4 43 $\frac{1}{2}$ |
| <i>& 11</i> | II 4 44 $\frac{1}{2}$ |

¹ Etiam differentiæ Afc. Rectæ ab oculo Tauri observatæ sunt, sed lineis inductæ sunt.

| | |
|-------------------|-----------|
| Suprema Cathedræ | I 17 29 |
| & alter pes | II 17 29 |
| Flexura | I 7 19 |
| & Crus | II 7 19 |
| Flexura | I 3 36 |
| & Genu | II 3 36 |
| Flexura | I 7 13½ |
| & Caput | II 7 14 |
| Flexura | I 4 21½ |
| & Schedir | II 4 21⅔ |
| Flexura | I 3 2 |
| & Cingulum | II 3 1⅔ |
| Schedir | I 2 37¼ |
| & Caput | II 2 37¼ |
| Schedir | I 1 39 |
| & Cingulum | II 1 39 |
| Schedir | I 6 53 |
| & Genu | II 6 53 |
| Schedir | I 11 34 |
| & lucidus pes | II 11 34½ |
| Vndecima | I 6 44 |
| & Genu | II 6 44 |
| Vndecima | I 3 32 |
| & Flexura | II 3 32 |
| Vndecima Caßiopeæ | I 26 27½ |
| a stella Polari | II 26 28 |

Stellarum Caßiopeæ Declinationes
per Armillas

| | |
|--------------------------|------------|
| Suprema Cathedræ | I 56 53½ |
| | II 56 53½ |
| Schedir | I 54 17½ |
| | II 54 17½ |
| Vndecima Caßiopeæ | I 60 40½ |
| | II 60 39½ |
| Lucida in □ vrfæ | 75 50⅓ |
| minoris | 75 50¼ |
| Diff. æquatoria a | 76 21½ |
| corde Ω | 76 19 |
| Altera in □ minus lucida | 73 17½ ter |
| Diff. æquat. a | 83 37½ |
| corde Ω | 83 36 |
| | 83 37⅔ |
| Oculus Draconis, Decl. | 51 35 |
| | 51 35½ |
| Diff. Asc. a Spica ♍ | 70 38½ |
| | 70 38 |

DIE 4 MARTIJ.

| | |
|------------------------------|--------|
| Canis min. in Mer. per Tich. | 40 18½ |
| Decl. eius per Armill. | 6 12⅔ |
| alt. pinnac. | 6 13¼ |

Pro Stellis Caßiopeæ

| | Declin. | Diff. Asc. R. a corde Ω |
|-----------------|-----------|----------------------------|
| Lucid. Cathedræ | I 56 54 | 149 27 |
| | II 56 53⅔ | 149 27 |
| Flexura | I 58 29 | 138 14¼ |
| | II 58 29 | 138 13 |
| | III 58 29 | 138 14¼ |
| Schedir | I 54 18 | 141 59½ |
| | II 54 17½ | 141 59⅔ |
| Genu Caß. | I 58 5½ | 131 27½ |
| | II 58 5½ | 131 27½ |
| Luc. pes Caß. | I 61 37½ | 124 54½ |
| | II 61 37½ | 124 54½ |

DIE 5 MARTIJ.

| | |
|--|--------|
| Canis minor per Q. Tich. | 40 17⅔ |
| per Q. Volub. | 40 18 |
| Declin. per Armill. | 6 13 |
| Suprema duarum informium infra pe- des priores vrfæ maioris | |
| per Q. Volub. | 72 34⅔ |
| Declin. per Armillas | 38 28½ |
| Sequens istarum infra vrfam | 70 10½ |
| Declin. per Armillas | 36 5 |

DIE 8 MARTIJ.

Distantiæ Stellarum Caßiopeæ
per Sextantem

| | |
|--------------------|-----------|
| Inter vndecimam | I 6 25¼ |
| & Schedir | II 6 26 |
| | III 6 27 |
| | IV 6 26 |
| | V 6 26 |
| Inter vndecimam | I 5 19 |
| & cingulum | II 5 19¾ |
| | III 5 19 |
| Inter vndecimam | I 3 34 |
| & Flexuram | II 3 32 |
| | III 3 34¼ |
| | IV 3 32 |
| | V 3 33 |
| Inter 11 & lucidam | I 4 44½ |
| Cathedræ | II 4 44 |
| | III 4 44 |

Distantiæ hæ sunt repetendæ, nam
neque erat exacte serenum, neque
instrumentum propter tempestatem
tranquillum esse potuit.

DIE 24 JUNIJ.

| Ad Vesperas. | | Inter nubeculas. | | | | |
|--------------|------------------|--|---------------------|---------|------------------|---------------------|
| | | Arcturi Azim. | | | | |
| H. | M. | a merid. ad occ. | Altit. | Declin. | | |
| 10 | 33 $\frac{1}{3}$ | 71 0 | 37 52 $\frac{1}{2}$ | 21 | 23 | 21 22 $\frac{1}{4}$ |
| 10 | 38 $\frac{1}{2}$ | 72 0 | 37 19 $\frac{1}{2}$ | | | |
| 10 | 42 $\frac{3}{4}$ | 73 0 | 36 45 | | | |
| 10 | 46 $\frac{5}{6}$ | 74 0 | 36 10 $\frac{1}{2}$ | | | |
| 10 | 51 $\frac{1}{2}$ | 75 0 | 35 35 $\frac{1}{2}$ | | | |
| | | Azim. Luc. Vulturis a merid. ad ort. | | | | |
| 11 | 1 $\frac{5}{6}$ | 30 0 | 38 35 | 7 | 52 $\frac{1}{2}$ | |
| 11 | 5 $\frac{1}{2}$ | 29 0 | 38 50 | | | |
| 11 | 7 $\frac{5}{6}$ | 28 0 | 39 3 | | | |

DIE 22 SEPTEMBRIS.

Manus Antinoi in Merid.
habuit altit. 32 7 $\frac{1}{4}$

DIE 23 SEPTEMBRIS.

Altitudo lucidæ Vulturis in Merid.
per Volub. 41 57
34 5 $\frac{1}{2}$
7 51 $\frac{1}{2}$

Per Armillas maiores inueni eandem declinationem 7 51 $\frac{1}{2}$ præcise vt prius, idque post eodem vesperi rectificatas armillas idque vtroque pin-nacidio.

Per Armillas maiores

| | | |
|----------------------------|-------------------------------|--|
| Schedir Caßiop. | vno 54 18 | Cum eßent a polo versus ortum |
| | 54 18 | |
| Cathedræ lucida | vno 56 54 $\frac{1}{2}$ | |
| | alt. 56 54 $\frac{1}{2}$ | |
| | vno 56 54 | a polo versus ortum |
| | alt. 56 53 $\frac{3}{4}$ | |
| Flexura | vno 58 29 $\frac{1}{2}$ | |
| | alt. 58 30 | |
| Alt. Merid. peßt. Cygni | | |
| | per Volub. 73 5 $\frac{1}{2}$ | |
| Alt. Merid. oris Pegafi | | |
| | per Volub. 42 9 $\frac{1}{6}$ | |
| Hinc prouenit declinatio | 8 3 $\frac{1}{2}$ | |
| differt ab armillis minuto | 1. | |
| Declin. per Armillas | 8 2 $\frac{1}{2}$ | |
| | alt. 8 2 $\frac{1}{2}$ | |
| Caput Pegafi per Volub. | 38 18 $\frac{1}{2}$ | |
| Declin. per Armill. | 4 14 | |
| altero pinnac. | 4 13 $\frac{3}{4}$ | |

Declinatio

| | | |
|---------------------|---------------------|---------------------------------------|
| Flexuræ | 58 27 | cum a polo eßent versus occasum |
| Luc. Cathedræ | 56 51 | |
| Schedir Caß. | 54 14 $\frac{1}{4}$ | |
| verf. ort. | verf. occ. | diff. |
| 58 29 $\frac{3}{4}$ | 58 27 | 2 $\frac{3}{4}$ |
| 56 53 $\frac{5}{6}$ | 56 51 | 2 $\frac{5}{6}$ |
| 54 18 | 54 14 $\frac{1}{4}$ | 3 $\frac{3}{4}$ |

Post rectificatum Q. Volub.

| | Alt. mer. per Q. | Declinatio proue- niens | per Arm. |
|------------------|---------------------|-------------------------------|---------------------|
| Caput Androm. | 60 55 $\frac{1}{2}$ | 26 50 | 26 50 |
| Extrem. alæ Peg. | 46 59 $\frac{1}{2}$ | 12 54 | 12 54 $\frac{1}{2}$ |
| Stellæ Polaris. | | | |
| alt. max. | 58 51 | | |
| Flexura Caß. | 87 26 $\frac{3}{4}$ | 58 27 $\frac{3}{4}$ | |

DIE 24 SEPTEMBRIS.

Præc. lucid. Vult. Alt. Merid.
per Q. Volub. 43 47 $\frac{1}{2}$
Declin. per Armill. 9 41 $\frac{3}{4}$
Lucida Vulturis 41 57 $\frac{1}{2}$
Declin., vtroque pinn. 7 51 $\frac{3}{4}$
Examinatio instrumenti
ad stellas quasdam Caßiopeæ
versus ortum a polo fitas

| | vno pinn. | altero |
|------------------|---------------------|---------------------|
| Lucida Cathedræ | 56 52 $\frac{2}{3}$ | 56 52 $\frac{1}{4}$ |
| Schedir Caßiop. | 54 15 $\frac{1}{2}$ | 54 16 |
| Flexura Caßiop. | 58 28 $\frac{1}{2}$ | 58 28 $\frac{1}{6}$ |
| Luc. □ vrfæ min. | 75 50 $\frac{1}{2}$ | 75 50 $\frac{1}{2}$ |

DIE 27 SEPTEMBRIS.

Alt. Merid. extremæ inferioris
alæ Cygni 62 41 $\frac{2}{3}$
Hinc prouenit declinatio 28 36 $\frac{1}{6}$
Decl. per Armillas 28 35 $\frac{2}{3}$
Altit. oris Pegafi merid. 42 7 $\frac{1}{2}$
Decl. ex altit. 8 2
Decl. per Armillas 8 2 $\frac{1}{8}$
Non fuit satis ferenum.

DIE 28 SEPTEMBRIS.

Rurfus pro restitutione et correptione
instrumenti Declin.
vno pinn. altero Versus
Lucida Cathedræ 56 52 $\frac{1}{2}$ 56 52 ortum
Schedir Caßiop. 54 16 vtroque pinn.
Flexura Caß. 58 28 $\frac{1}{2}$ 58 28 $\frac{1}{3}$ Alt.
Arcturus 21 24 $\frac{1}{2}$ 21 24 $\frac{5}{6}$ 16 37

*Stellula in pectore Pegasi proxima
e duabus ad Scheat, qua vñ sumus
in cometa anni 77, a lucida Vulturis
per Sextantem 45 31*

bis accepta

Declin. stellulæ, bis,

vtroque pinn. 22 27½

Scheat a lucida capitis V, bis 41 19½

Declin. Scheat 25 51½

*Suprema duarum primarum
in plaustro vñfæ maioris ha-
buit Alt. Mer. per Volub. 29 52½*

Declinatio per Armill.,

vtroq. 63 59

Altera infer. in vñfæ,

alt. mer. minima 24 30 vel 24 29½

Declin. per Armillas 58 36½

alt. pinn. 58 36½

*Rectificauimus itaque armillas ita
vt ostenderent declinationem infe-
rioris in præcedentibus Rotis vñfæ
maioris 58 35½*

*Et hinc postea proueniebat superi-
oris decl. 63 58. Postea conuersa ad
meridiem armillarum obseruatione
inuenta est extrema alæ declinare*

vno pinn. 12 53½

altero 12 53½

Caput Androm. Declin. 26 49½

altero 26 49

| | Alt. per Q. Volub. | Declin. vno | altero |
|---------|-----------------------|----------------|--------|
| Caput | | | |
| Androm. | 60 55 5 | 26 49½ | 26 49¼ |

| | Alt. per Q. Volub. | Declin. vno | altero |
|----------|-----------------------|----------------|--------|
| Extrem. | | | |
| alæ Peg. | 46 59 30 | 12 53½ | 12 53¾ |

| | Alt. per Q. Volub. | Declin. vno | altero |
|-----------|-----------------------|----------------|--------|
| Præced. | | | |
| in cauda | | | |
| vñfæ mai. | | | |
| Alt. min. | 24 8 50 | 58 15¾ | 58 16 |

| | Alt. per Q. Volub. | Declin. vno | altero |
|-----------|-----------------------|----------------|--------|
| Seq. in | | | |
| eadem | | | |
| Alt. min. | 23 2 30 | 57 9 | 57 9 |

*Circa postremas obseruationes non
fuit satis serenum.*

*Distantia illius stellulæ in pectore Pe-
gasi a lucida V per Sext. Δ 44 45½*

44 45½

DIE 30 SEPTEMBRIS.

Os Pegasi in Merid. per Volub. 42 8

Declin. per Armillas 8 2

*Arcturum obseruauimus prope oc-
calum propter refractionem.*

Altit. 4 48 Declin. 21 30¾

4 30 21 30⅝

4 10 21 31

*Patet itaque quod in altit. 4½ parti-
um faciat Arcturus refractionem ad
minimum 7 scrupulorum in declina-
tione.*

Alt. merid. capitis Pegasi 38 19½

mediocriter quadrat

Declin. per Armillas 4 14

alt. pinn. 4 13½

Superior primarum in vñfæ

altitudo infima 29 52¼

Declin. per Armillas 63 59

alt. pinn. 63 59½

debet esse 63 57¾

Inferior primarum in vñfæ 24 29¾

Declin. 58 36½

altero 58 36½

debet esse 58 35½

Repetita declinatio inferioris

primarum in vñfæ maiore 58 35½

altero 58 35¾

Posteriorum inferior in plaustro

vñfæ maioris per Quadr. 21 54¾

Declin. eiusdem

per Armill. 56 0½

altero 56 0½

Decl. proueniens ex altit. 56 0½

Caput Andromedæ 60 55

Decl. ex altit. 26 49½

Decl. per Armill. vtroq. 26 50

Extrema alæ Pegasi 46 59

Decl. ex altit. 12 53½

Decl. per Armillas 12 54½

Altit. Stellæ Polaris maxima

per Q. Volub. 58 50¾

Præced. in cauda vñfæ mai. 24 8¾

Decl. ex altit. 58 14 15

Decl. per Armillas vno 58 14½

alt. pinn. 58 14½

Sequens in cauda vñfæ mai. 23 1½

Decl. ex altit. 57 7

Decl. per Armillas 57 7½

Postrema caudæ vñfæ mai. 17 20

Decl. ex altit. 51 25½

Decl. per Armill., vno 51 25½

altero 51 25⅝

DIE 19 OCTOBRIS.

Vulturis locus in 26 0 γ
 Os Pegafi obseruabatur in 26 7 γ
 bis obseruando
 Vulturis lucida in 26 0 γ
 Extrema alæ Pegafi I 3 23 $\frac{1}{2}$ γ
 II 3 23 γ

DIE 31 OCTOBRIS.

Manus Antinoi

Decl. Manus Antinoi 1 56 $\frac{1}{4}$ M.

| Lucida γ | Manus Antinoi | Diff. asc. |
|---------------------|---------------------|---------------------|
| 55 11 $\frac{1}{2}$ | 33 22 | 88 33 $\frac{1}{2}$ |
| 54 20 $\frac{1}{2}$ | 34 12 | 88 32 $\frac{1}{2}$ |
| 53 59 | 34 34 $\frac{1}{2}$ | 88 33 $\frac{1}{2}$ |
| 53 28 $\frac{1}{2}$ | 35 5 | 88 33 $\frac{1}{2}$ |

Pone itaque Ascens.

different. 88 33 $\frac{1}{2}$

Os Pegafi

Declin. 8 2 B.

| Lucida γ or. | Os Pegafi occ. | Diff. ascensionales |
|---------------------|---------------------|---------------------|
| 40 48 $\frac{1}{4}$ | 24 12 $\frac{1}{2}$ | 65 0 45 |
| 40 14 $\frac{1}{2}$ | 24 45 | 64 59 $\frac{1}{2}$ |
| 39 36 | 25 24 | 65 0 |

Pone itaque 65 0

Lucida colli Pegafi

Declin. Luc. in collo Peg. 8 42 B.

| Luc. γ or. | Luc. colli Pegafi occ. | Diff. æquat. |
|---------------------|------------------------|---------------------|
| 35 34 | 15 10 | 50 44 |
| 34 57 | 15 47 $\frac{3}{4}$ | 50 44 $\frac{3}{4}$ |
| 34 27 $\frac{1}{2}$ | 16 17 $\frac{1}{2}$ | 50 45 |
| 34 2 $\frac{1}{4}$ | 16 43 | 50 45 $\frac{1}{4}$ |
| 33 25 | 17 20 | 50 45 |

Pone different. ascensional. 50 45 0

Prima Alæ.

Declin. primæ alæ Pegafi B. 13 1

| Lucida γ or. | Prima alæ Pegafi occid. | Diff. æquat. |
|---------------------|-------------------------|---------------------|
| 32 45 $\frac{3}{4}$ | 12 8 $\frac{1}{2}$ | 44 54 $\frac{1}{4}$ |
| 32 15 | 12 38 $\frac{1}{2}$ | 44 53 $\frac{1}{2}$ |
| 31 40 | 13 14 $\frac{1}{2}$ | 44 54 $\frac{1}{2}$ |
| 31 13 $\frac{1}{3}$ | 13 41 $\frac{1}{2}$ | 44 54 $\frac{5}{6}$ |
| 30 32 | 14 22 $\frac{1}{2}$ | 44 54 $\frac{1}{2}$ |

Pone hanc different. Asc. 44 54 $\frac{1}{2}$

DIE 1 NOUEMBRIS.

Declinatio lucidæ Vulturis 7 51 B.
 Declinatio oris Pegafi 8 2 $\frac{1}{3}$ B.

Manus Antinoi sinistra

Declinatio 1 56 $\frac{1}{2}$ M.

| Lucida γ orient. | Manus Ant. occid. | |
|-------------------------|-------------------|---------------------|
| 57 13 $\frac{3}{4}$ | 31 20 | 88 33 $\frac{3}{4}$ |
| 56 20 $\frac{1}{2}$ | 32 13 | 88 33 $\frac{1}{2}$ |

| H | M | Lucida Vult. occ. | Os Pegafi occ. | Diff. æquat. |
|---|----|---------------------|---------------------|---------------------|
| 7 | 29 | 46 2 $\frac{1}{2}$ | 17 43 $\frac{1}{2}$ | 28 19 |
| 7 | 32 | 46 48 | 18 28 $\frac{3}{4}$ | 28 19 $\frac{1}{4}$ |
| 7 | 34 | 47 18 $\frac{3}{4}$ | 19 0 | 28 18 $\frac{3}{4}$ |
| 7 | 37 | 47 59 $\frac{1}{2}$ | 19 40 $\frac{1}{4}$ | 28 19 $\frac{1}{4}$ |

Pone different. ascensional. 28 19

Lucida in collo Pegafi

| | | | |
|--------------------|---------------------|---------------------|---------------------|
| 7 44 $\frac{2}{3}$ | 49 50 $\frac{1}{6}$ | 7 17 | 42 33 $\frac{1}{6}$ |
| 7 47 $\frac{1}{3}$ | 50 34 $\frac{3}{4}$ | 8 0 $\frac{3}{4}$ | 42 34 |
| 7 50 | 51 18 | 8 45 | 42 33 |
| 7 54 $\frac{3}{4}$ | 52 23 $\frac{1}{6}$ | 9 50 | 42 33 $\frac{5}{6}$ |
| 7 57 | 52 56 $\frac{1}{2}$ | 10 23 $\frac{1}{2}$ | 42 33 |
| 7 59 | 53 24 $\frac{1}{2}$ | 10 52 | 42 32 $\frac{1}{2}$ |

Pone hanc different. Asc. 42 33

Prima alæ Pegafi

| Luc. Vult. occ. | Prima alæ Peg. occ. | |
|-----------------|---------------------|--|
|-----------------|---------------------|--|

| | | | |
|-------------------|---------------------|--------------------|---------------------|
| 8 2 $\frac{1}{2}$ | 54 24 $\frac{1}{2}$ | 6 0 $\frac{3}{4}$ | 48 23 $\frac{3}{4}$ |
| 8 6 $\frac{1}{2}$ | 55 16 | 6 52 $\frac{1}{2}$ | 48 23 $\frac{1}{2}$ |
| 8 9 $\frac{1}{2}$ | 56 2 $\frac{1}{2}$ | 7 38 $\frac{1}{2}$ | 48 24 |

Pone hanc differ. Asc. 48 23 $\frac{3}{4}$

8 33 Declin. Scheat Pegafi 25 52 $\frac{1}{2}$

8 36 Diff. inter lucidam

Vulturis & dextrum I 45 30

genu Pegafi per Sext. II 45 29 $\frac{5}{6}$

Declin. dextrigeni Peg. 28 6 $\frac{1}{4}$

| Caput Pegafi occid. | Lucida γ orient. | |
|---------------------|-------------------------|--|
|---------------------|-------------------------|--|

| | | | |
|------|---------------------|---------------------|---------------------|
| 9 23 | 39 39 | 18 59 $\frac{1}{2}$ | 58 38 $\frac{1}{2}$ |
| 9 25 | 40 12 $\frac{1}{2}$ | 18 28 $\frac{1}{4}$ | 58 40 $\frac{3}{4}$ |
| 9 27 | 40 50 | 17 50 | 58 40 |
| 9 30 | 41 30 | 17 9 | 58 39 |
| 9 33 | 42 12 $\frac{1}{4}$ | 16 26 $\frac{1}{2}$ | 58 38 $\frac{3}{4}$ |

Pone diff. æquatoriam 58 39 $\frac{1}{2}$

10 30 Declin. cap. Pegafi γ 4 14 $\frac{1}{2}$ B.

Declin. extremæ

alæ Pegafi 12 53 $\frac{1}{2}$

DIE 6 NOUEMBRIS.

Obſeruabatur lucida in \square vrfæ mi-
moris idque ſaltem pro emendati-
one, ſi opus fuerit, & inquisitione Me-
ridiani in hunc modum in notatis
Azimutis

Mane

H.5 29 $\frac{1}{3}$ ' Altitudo 53 Stellæ H.5 M.2 $\frac{1}{6}$
5 38 $\frac{3}{4}$ 52 $\frac{1}{2}$ Repetita H.4 M.53
5 46 52
5 54 $\frac{3}{4}$ 51 $\frac{1}{2}$

Postea denuo mane eadem ſtella
obſeruabatur in certa altitudine vt
ſequitur

5H35^M Fuit mane in altitudine 55 0
5 42 $\frac{1}{2}$ 55 $\frac{1}{2}$
5 51 56 0
6 6 $\frac{1}{2}$ 57 0
6 10 $\frac{1}{2}$ 57 $\frac{1}{4}$
6 14 57 $\frac{1}{2}$

Stella polaris etiam denuo obſer-
uabatur hoc vesp̄ri in maxima ſua
remotione a Polo pro examinanda
limitandaque Meridiani linea

H. 6 M. 22 58 0

Caput Pegafi

| | Vultur occ. | Caput Pegafi occ. | Diff. Afc. |
|-----------------------|---------------------|----------------------|---------------------|
| 7 ^H 5' 25" | 47 37 | 12 57 $\frac{3}{4}$ | 34 39 $\frac{1}{4}$ |
| 7 9 20 | 48 38 $\frac{1}{3}$ | 13 58 | 34 40 $\frac{1}{3}$ |
| 7 12 8 | 49 25 | 14 44 $\frac{1}{6}$ | 34 40 $\frac{5}{6}$ |
| 7 15 25 | 50 13 $\frac{1}{3}$ | 15 34 | 34 39 $\frac{2}{3}$ |
| 7 17 50 | 50 52 $\frac{3}{4}$ | 16 12 $\frac{1}{2}$ | 34 40 $\frac{1}{4}$ |

Pone hic differentiam
æquatoriam 34 40
& inſenſibiliter aberrabis.

Extrema alæ Pegafi

| | Vultur occ. | Extrema alæ or. | Diff. æquator. |
|--------------------|---------------------|---------------------|---------------------|
| 7 21 $\frac{3}{4}$ | 51 52 $\frac{1}{2}$ | 13 25 | 65 17 $\frac{1}{2}$ |
| 7 23 $\frac{1}{2}$ | 52 20 $\frac{1}{2}$ | 12 58 $\frac{1}{4}$ | 65 18 $\frac{3}{4}$ |
| 7 25 $\frac{1}{2}$ | 52 53 $\frac{1}{2}$ | 12 25 | 65 18 $\frac{1}{2}$ |

Pone diſtantiam
æquatoriam 65 18 $\frac{1}{4}$

Vultur
occ.

Prima alæ
occ.

| | | | |
|--------------------|---------------------|--------------------|---------------------|
| 7 32 25 | 54 43 | 6 18 $\frac{1}{3}$ | 48 24 40 |
| 7 34 40 | 55 17 | 6 55 | 48 22 |
| 7 36 30 | 55 46 | 7 22 | 48 24 |
| 7 38 15 | 56 13 $\frac{1}{2}$ | 7 50 | 48 23 $\frac{1}{2}$ |
| 7 41 $\frac{1}{3}$ | 56 55 | 8 32 | 48 23 |

Pone diſtantiam æquat. 48 24

Altitudo Vulturis quaſi 25 graduum

Luc. Vult.
occ.

Luc. colli
Pegafi occ.

Diff.
æquat.

| | | | |
|--------------------|---------------------|-------|---------------------|
| 7 48 | 58 41 $\frac{1}{6}$ | 16 8 | 42 33 $\frac{1}{6}$ |
| 7 49 $\frac{1}{2}$ | 59 6 $\frac{1}{2}$ | 16 34 | 42 32 $\frac{1}{2}$ |
| 7 51 $\frac{1}{3}$ | 59 42 $\frac{1}{4}$ | 17 8 | 42 34 $\frac{1}{4}$ |

Pone different. aſc. 42 33 $\frac{1}{2}$

Postea obſeruabantur declinatio-
nes earundem ſtellarum, idque in
hunc modum.

Declinatio Capitis Pegafi 4 13

Repetita Decl. Cap. Peg. 4 13 $\frac{1}{3}$

Lucida colli Pegafi declin. 8 43

Eadem repetita 8 43

Prima alæ Pegafi 13 6 } incertæ

Eadem repetita 13 6 }

Extrema alæ Pegafi 12 53 $\frac{1}{2}$

Eadem repetita 12 53 $\frac{1}{2}$

Scheat Pegafi declin. 25 53

Eadem repetita 25 53 $\frac{1}{2}$

Os Pegafi habet declin. 8 2 $\frac{1}{2}$

Repetita eiusem 8 2 $\frac{1}{2}$

DIE 7 NOUEMBRIS.

Declin. capitis Ophiuchi B. 12 57

altero pinn. 12 56 $\frac{5}{6}$

Decl. dextri humeri Oph. B. 4 50 $\frac{1}{3}$

altero 4 50 $\frac{1}{3}$

Decl. ſin. humeri Ophiuchi B. 9 35 $\frac{1}{2}$

altero 9 35 $\frac{1}{4}$

DIE 13 NOUEMBRIS.

Declin. capitis Ophiuchi 12 57 $\frac{1}{2}$

Decl. dextri hum. Oph. 4 51 $\frac{1}{4}$

Decl. ſin. hum. Oph. 9 36 $\frac{1}{2}$

Caput Ophi-
uchi occ.

Lucida Vult.
occ.

| | | |
|---------------------|---------------------|---------------------|
| 68 34 $\frac{1}{2}$ | 34 53 $\frac{1}{2}$ | 33 41 |
| 69 12 | 35 29 $\frac{1}{2}$ | 33 42 $\frac{1}{2}$ |
| 69 37 | 35 54 $\frac{3}{4}$ | 33 42 $\frac{1}{4}$ |
| 70 1 | 36 19 | 33 42 |

Dext. hum. Oph. occ.

| | | |
|---------------------|-------|---------------------|
| 69 20 $\frac{1}{2}$ | 37 27 | 31 53 $\frac{1}{2}$ |
| 69 47 | 37 54 | 31 53 |

DIE 16 NOUEMBRIS.

Lucida Lyræ

| Declin. | Diff. æquat. a lucida γ or. |
|---------------------|---------------------------------------|
| 38 28 | 110 10 |
| 38 28 $\frac{1}{4}$ | 110 10 |
| 38 28 $\frac{1}{6}$ | 110 10 |

Os Cygni

| | |
|-------|-------|
| 27 11 | 97 24 |
| 27 11 | 97 24 |

Pectus Cygni

| | |
|---------------------|--------------------|
| 38 59 $\frac{1}{2}$ | 84 5 |
| 38 59 $\frac{3}{4}$ | 84 4 $\frac{1}{2}$ |
| 38 59 $\frac{1}{2}$ | 84 5 |

Cauda Cygni

| | |
|---------------------|--------------------|
| 43 51 $\frac{1}{2}$ | 79 7 $\frac{1}{2}$ |
| 43 51 $\frac{1}{2}$ | 79 8 bis |

DIE 17 NOUEMBRIS.

Cauda Vulturis

| Cauda Vult. occ. | Luc. γ or. | Diff. Afc. |
|-----------------------------|-------------------|---------------------|
| 54 19 $\frac{1}{2}$ | 45 31 | 99 50 $\frac{1}{2}$ |
| 54 44 | 45 4 | 99 48 |
| 55 12 $\frac{3}{4}$ | 44 35 | 99 47 $\frac{3}{4}$ |
| 55 36 $\frac{1}{4}$ | 44 12 | 99 48 $\frac{1}{4}$ |
| Pone hanc distantiam æquat. | | 99 48 $\frac{1}{2}$ |
| Declin. caudæ Vulturis B. | | 2 25 |

| Sinister humerus Ophiuchi occ. | Luc. Vult. occ. | |
|-----------------------------------|---------------------|---------------------|
| 71 11 $\frac{1}{2}$ | 45 31 | 25 40 $\frac{1}{2}$ |
| 71 57 | 46 17 $\frac{1}{2}$ | 25 39 $\frac{1}{2}$ |
| 72 45 $\frac{1}{3}$ | 47 5 | 25 40 $\frac{1}{3}$ |

Pone 25 40

Posito loco lucidæ γ in 1 55 γ obseruabatur Lucida Vulturis per Armillas Zodiaci in 26 2 \approx
Rurfus 26 2 $\frac{2}{3}$ \approx

Viceversa, posito loco luc. Vult. in 26 0 \approx obseruabatur Luc. γ in 1 53 γ .
8^H 38' 20 transiuit extrema alæ Pegasi per Merid. & habuit Alt. 47 0

DIE 23 NOUEMBRIS.

H. 6 0' Alt. minima inferioris duarum præcedentium in \square

vrfæ maioris 24 29 35

Declin. eiusdem vno pinn. 58 37 0

altero 58 37 15

Altit. minima superioris duarum in \square Plauftri præcedentium per Q. Volub. 29 52

Declin. eiusdem per Armill. 63 59

altero pinn. 63 58 45

H. 6 $\frac{1}{2}$ Declin. oculi Draconis 52 39alt. pinn. 52 38 $\frac{3}{4}$

Declin. faucis Draconis 51 35

alt. pinn. 51 34 $\frac{3}{4}$

Distabant hæ duæ stellæ in capite Draconis lucidæ a Polo ad occasum.

H. 6 54' Alt. minima inferioris sequentium in \square Plauftri per Q. volub.

Azimuthalem 21 54 30

Declin. eiusdem vno 56 0 30

altero pinn. 56 0 40

H. 7 $\frac{1}{2}$ Altit. minima superioris duarum sequentium in \square Plauftri 25 15 30

Decl. eiusdem per Arm.,

vtrq. 59 21 $\frac{1}{2}$

H. 8 0' Altit. minima primæ in Cauda Vrfæ maioris per Q. Volub.

Azimuthalem 24 8 55

Decl. eiusdem per Arm. 58 15

altere 58 15 $\frac{1}{2}$

H. 8 28' Alt. min. Mediæ

caudæ vrfæ mai. 23 1 55

Decl. eiusdem per Armill. 57 7 $\frac{3}{4}$ altero 57 7 $\frac{1}{2}$ H. 8 54' Altitudo minima postremæ in cauda eiusdem 17 21 $\frac{1}{8}$ Decl. eiusdem per Armill. 51 27 $\frac{1}{2}$ altero pinn. 51 27 $\frac{1}{8}$ Posita γ lucida in 1 55 γ fuitlocus Oris Pegasi in I 26 14 \approx II 26 13 $\frac{3}{4}$ \approx III 26 13 $\frac{3}{4}$ \approx Posito loco lucidæ γ vt anteain 1 55 γ obseruabatur caput Pegasi in I 1 7 $\frac{1}{2}$ \times II 1 7 $\frac{1}{2}$ \times

DIE 24 NOUEMBRIS A. M.

Altitudo maxima lucidioris sequentium in \square Vrfæ maioris 89 57 20

Declin. oculi Draconis, vno 52 38 $\frac{1}{2}$
alt. pinn. 52 39

Declin. faucis Draconis vno 51 35
alt. pinn. 51 35

Distabat tunc a Polo ad ortum.
Altit. maxima alterius sequentium
in \square Plauſtri 86 35
ſed hæc non ſatis exacta. Plures in vr-
ſa maiori propter auroram obſeruare
non licuit.

Ad Veſperas.

Poſito loco lucidæ \vee in 1 55 γ
obſeruabatur locus 26 1 γ
lucidæ Vulturis 26 0 γ
in 26 1 $\frac{1}{2}$ γ
25 59 γ

Erat Vulturis ſtella nubibus offuſcata.

Poſito loco lucidæ \vee in 1 55 γ
Extremæ alæ Pegafi I 3 24 \vee
locus obſeruabatur II 3 24 $\frac{1}{2}$ \vee

Alt. max. ſtellæ Polaris 58 50 $\frac{1}{2}$

Alt. max. Schedir Caſiop. 88 23

Alt. max. Flexuræ Caſ. 87 27 $\frac{1}{2}$

Declinationes trium fixarum Caſi-
opeæ cum eſſent verſus ortum & oc-
caſum a Polo hoc anno.

Lucida Cathedræ 56 52 20

Schedir Caſiopeæ 54 16 0

Flexura Caſiopeæ 58 28 20

Atque hæ ſatis bene conueniunt
cum ijs, quas iuxta verticem habere
per Armillas deprehenſæ ſunt. Vnde
in ſitu inſtrumenti & Poli Altitudine
inſenſibiliter aberratur, ſed refra-
ctionis in decliui ſitu inſinuatio hinc
patet.

DIE 28 NOUEMBRIS.

Poltea¹ obſeruabatur Caput Draco-
nis verſus occaſum pro rectificandis
armillis in meridiano explorandis.

Lucidioris in capite Draconis iuxta
oculum ſiniſtrum

Decl. vno 51 34 $\frac{5}{6}$

altero 51 34 $\frac{1}{4}$

Pone declinationem 51 34 $\frac{1}{2}$

Alterius in fauce vno 52 39

Draconis altero 52 38 $\frac{1}{2}$

Poltea denuo obſeruabantur hæ
duæ ſtellæ quia melius apparebant,
crepuſculo vespertino iam diſce-
dente.

Circa horam 5 M. 19 lucidior in ca-
pite draconis verſus occaſum a polo
declinabat vt prius vno 51 34 $\frac{1}{2}$

altero 51 34

Pone 51 34 $\frac{1}{2}$ exactius quam prius.

Circa horam 5 M. 25 obſeruabatur
altera in dracone iuxta faucem, et
habuit declina- vno 52 39 $\frac{1}{2}$

tionem pinnac. altero 52 38

Pro rectificando horologio obſerua-
batur lucida \vee diſtans a meridiano
47 $^{\circ}$ 14' Hora 5 30' 30".

Mane repetebatur declinatio ſtel-
larum in draconis capite verſus or-
tum et inueniebatur ſuperior illarum

vno 52 39 $\frac{1}{2}$

altero 52 39 $\frac{3}{4}$

altera inferior vno 51 35

altero 51 35 $\frac{1}{2}$

Hinc poterit examinari ſitus inſtru-
menti in meridiano.

Sequuntur obſervationes Stellarum Vrfæ maioris cum tranſirent
per Meridianum infra polum in minima ſua altitudine.

DIE 28 NOUEMBRIS.

| Nomina ſtellarum | Tempus horol. | Diſt. Lucidæ \vee a Merid. or. | Altit. Stellæ | Declinatio | |
|----------------------------|--|-------------------------------------|---------------------|----------------------------------|---------------------|
| | | | | per armillas maiores vno pin. | alt. |
| Inferior in \square vrfæ | non obſeruabatur | 47 0 $\frac{1}{2}$ | 24 29 $\frac{5}{6}$ | 58 37 | 58 36 $\frac{5}{6}$ |
| Superior in \square Vrfæ | 5 ^H 36 ^M 25 ^S | 46 45 | 29 52 $\frac{1}{4}$ | 63 59 | 63 59 |
| Inf. ſequentium | 6 39 10 | incerta | 21 54 $\frac{1}{2}$ | 56 1 | 56 1 $\frac{1}{4}$ |
| Sup. ſequentium | | | 25 15 | 59 22 | 59 22 $\frac{1}{8}$ |
| Præcedens caudæ | 7 34 50 | 17 8 $\frac{1}{2}$ | 24 9 | 58 15 $\frac{1}{2}$ | 58 16 |
| Media caudæ | 8 6 0 | 9 21 | 23 2 $\frac{1}{6}$ | 57 9 $\frac{1}{2}$ | 57 9 |
| Extrema caudæ | | | 17 21 | 51 28 $\frac{1}{2}$ | 51 28 $\frac{1}{4}$ |

¹ Poſt obſervationem Veneris H. 4 M. 51 factam.

| | <i>Inf. in</i> ☐ | <i>Sup. in</i> ☐ | <i>Inf. sequ.</i> | <i>Sup. sequ.</i> |
|------------------------|------------------|------------------|-------------------|------------------------|
| <i>Declinatio</i> | 58 33 55 | 63 56 30 | 55 58 30 | 59 19 38 |
| <i>Alt. poli</i> | 55 55 55 | 55 55 45 | 55 56 0 | 55 55 22 $\frac{1}{2}$ |
| <i>Decl. obseruata</i> | 58 37 0 | 63 59 0 | 56 1 15 | 59 22 $\frac{1}{8}$ |

Eodem die, vesperi.

Altitudines maximæ stellarum Cassiopeæ supra polum.

| | | <i>Luc. Υ or.</i> | <i>Alt.</i> | <i>vno pin.</i> | <i>Declin. altero</i> |
|---------|-----------------|---------------------|---------------------|---------------------|-----------------------|
| 6 47 2 | Lucida Cathedræ | 29 7 | 89 3 $\frac{1}{2}$ | 56 52 | 56 51 $\frac{3}{4}$ |
| 7 14 16 | Caput Cassiopeæ | 22 9 | 85 43 $\frac{3}{8}$ | 51 36 | 51 35 $\frac{3}{4}$ |
| 7 17 5 | Schedir | 21 26 $\frac{1}{2}$ | 88 22 $\frac{1}{2}$ | 54 16 $\frac{1}{4}$ | 54 16 |
| 7 31 25 | Flexura | 17 50 | 87 28 $\frac{1}{4}$ | 58 28 | 58 27 $\frac{1}{2}$ |
| 7 57 50 | Genu | 11 1 $\frac{1}{2}$ | 87 51 $\frac{3}{8}$ | 58 3 $\frac{1}{2}$ | 58 3 $\frac{1}{2}$ |
| 8 25 0 | Pes | 4 32 $\frac{1}{2}$ | 84 20 $\frac{1}{8}$ | 61 36 | 61 36 |

In minima sua altitudine.

| | | <i>Cor ♀ occid.</i> | <i>Alt.</i> | | |
|-----------------------------------|-----------------|---------------------|-------------------------|--|---------------------|
| 6 43 57 | Lucida Cathedræ | 30 6 $\frac{1}{4}$ | 22 49 | 56 57 | 56 57 $\frac{1}{2}$ |
| 7 14 15 | Schedir | 37 43 | 20 12 | 54 19 $\frac{1}{2}$ | 54 20 |
| <i>Luc. Cathedræ Max.</i> 89 3 30 | | | <i>Schedir</i> 88 22 45 | <i>Atque hoc melius quadrat in polari altitudine quia quadrans vtrunque videbat.</i> | |
| <i>Min.</i> 22 49 | | | 20 12 | | |
| <i>Declin.</i> 56 52 45 | | | 54 17 23 | | |
| <i>Alt. poli</i> 55 56 15 | | | 55 54 37 | | |

Distantia inter australiorem in manu
Andromedæ et Genu Pegasi per Sext. nouum

16 58 $\frac{1}{2}$

16 59 $\frac{1}{2}$

16 59

16 59 $\frac{1}{2}$

Sed Sextans vento irrequebatur.

Declinatio posterioris in cauda Draconis cum circa Meridianum infra polum esset 75 25 vnico pinnacidio.

DIE 29 NOUEMBRIS A. M.

Cum tranfrent per Meridianum in maxima sua altitudine supra polum.

| | | <i>Cor ♀ occid.</i> | <i>Alt. max.</i> | <i>Declinatio vno</i> | <i>altero</i> |
|---------|-----------------------|---------------------|---------------------|-----------------------|---------------------|
| 5 33 56 | Inferior præced. in ☐ | 12 31 | 87 22 | 58 34 $\frac{1}{2}$ | 58 34 $\frac{1}{2}$ |
| 5 35 44 | Sequens ex præced. ☐ | 12 57 | 81 59 $\frac{1}{4}$ | 63 57 | 63 56 $\frac{1}{2}$ |
| 6 29 5 | Inferior ex sequ. ☐ | 26 21 | 89 57 $\frac{1}{2}$ | 55 59 $\frac{1}{2}$ | 55 59 $\frac{1}{2}$ |
| 6 51 49 | Superior e sequ. | 32 3 | 86 35 $\frac{1}{4}$ | 59 20 | 59 19 $\frac{3}{8}$ |
| 7 32 16 | Præcedens caudæ | 42 18 | 87 42 $\frac{3}{8}$ | 58 12 $\frac{1}{2}$ | 58 12 |

Eodem die ad vespervas.

Sequentes obseruationes factæ sunt paulo aliter quam antea, rectificatis armillis.

Obseruationes stellarum vrsæ maioris in minima sua altitudine.

| | | <i>Lucid. Υ or.</i> | <i>Alt. min.</i> | <i>Declinatio vno</i> | <i>altero</i> |
|---------|--|---------------------|---------------------|-----------------------|---------------------|
| 5 29 20 | Infer. præced. ☐ | 47 2 $\frac{1}{2}$ | 24 29 $\frac{1}{2}$ | 58 37 $\frac{1}{8}$ | 58 37 $\frac{1}{2}$ |
| 5 30 25 | Sup. præced. ☐ | 46 46 $\frac{1}{2}$ | 29 52 $\frac{1}{4}$ | 64 0 | 64 0 $\frac{1}{8}$ |
| 6 47 0 | Inferior seq. quad. | 27 31 $\frac{1}{2}$ | 25 14 $\frac{1}{8}$ | 59 22 $\frac{1}{2}$ | 59 22 $\frac{3}{4}$ |
| 5 58 22 | <i>Extrema lucidarum in cauda Draconis</i> | 39 45 | 37 31 $\frac{1}{2}$ | | |

Repetebatur eodem vesperi declinatio duarum stellarum in Capite Draconis in hunc modum.

| | | | | | |
|---|---------------------|-----------------|-------------|-------|-------------------------------------|
| <i>Faucis Draconis</i> | 52 39 $\frac{1}{4}$ | } <i>versus</i> | <i>Pone</i> | 52 39 | <i>et insensibiliter aberrabis.</i> |
| | 52 38 $\frac{3}{8}$ | | | | |
| <i>Extrema caudæ Draconis, altera sequens</i> | 51 35 | | | | |
| | 51 34 $\frac{1}{4}$ | | | | |

Obseruabatur eodem vesperi stellarum in cauda Draconis transitus per Meridianum in hunc modum.

Extrema lucidarum in cauda vrsæ maioris transiit Merid. 5^H 58^M 22", cum distantia lucidæ γ eßet a Meridiano 39^g 45', altitudo 37^g 31 $\frac{1}{2}$ '.

Observationes stellarum Caßiopeæ vespertinæ in maxima altitudine Meridiana vt sequitur.

Nota. Schedir Caßiopeæ & Caput transeunt Meridianum fere cum polari stella & habent altitudinem maximam meridionalem.

| | | Luc. γ or. | Alt. max. | Declinatio | |
|---------|-------------------------|---------------------|----------------------|---------------------|---------------------|
| | | | | vno | altero |
| 6 40 50 | <i>Lucida Cathedræ</i> | 29 1 | 89 3 $\frac{1}{8}$ | 56 53 | 56 52 $\frac{1}{2}$ |
| 7 3 18 | <i>Vndecima Caßiop.</i> | 23 24 $\frac{1}{2}$ | 85 16 $\frac{1}{12}$ | 60 40 | 60 39 $\frac{1}{2}$ |
| | <i>Caput Caßiop.</i> | | 85 44 $\frac{1}{8}$ | 51 36 $\frac{1}{2}$ | 51 36 $\frac{1}{2}$ |

Sequentes obseruationes factæ sunt rursus bene in libella verificatis instrumentis, tam Quadrante Volubili horizontali quam armillis maioribus æquatorijs & diligenter trutinatis singulis.

DIE 1 DECEMBRIS.

Obseruationes Stellarum Vrsæ maioris cum per Meridianum transirent Vespertinæ in minima sua altitudine.

| Nomina Stellarum | Tempus Horologij | Luc. γ a mer. | Alt. min. | Declinatio | |
|--|------------------|----------------------|---------------------|---------------------|---------------------|
| | | | | vno pin. | altero |
| <i>Infer. præced. in \square vrsæ</i> | 5 21 55 | 47 4 $\frac{3}{4}$ | 24 29 | 58 36 $\frac{1}{4}$ | 58 36 $\frac{1}{2}$ |
| <i>Sequens sed mediocris</i> | 5 24 5 | | 29 52 | 64 0 | 64 0 $\frac{1}{6}$ |
| <i>Inferior sequent. \square</i> | 6 16 45 | 33 16 $\frac{1}{2}$ | 21 55 $\frac{1}{2}$ | 56 1 $\frac{1}{4}$ | 56 1 $\frac{1}{3}$ |
| <i>Super. sequent. \square</i> | 6 39 27 | 27 33 $\frac{1}{4}$ | 25 15 $\frac{1}{2}$ | 59 22 $\frac{1}{2}$ | 59 23 |
| <i>Præced. caudæ</i> | 7 20 20 | 17 12 | 24 8 $\frac{5}{6}$ | 58 15 | 58 14 $\frac{3}{4}$ |
| <i>Media caudæ</i> | 7 51 50 | 9 20 | 23 2 $\frac{1}{4}$ | 57 8 $\frac{3}{4}$ | 57 9 |
| <i>Extrema caudæ</i> | 8 15 30 | 3 22 | 17 21 | 51 27 $\frac{1}{2}$ | 51 27 $\frac{1}{4}$ |

Matutinæ in maxima sua altitudine.

| | | Cor δ occ. | Alt. max. | | |
|--|---------|---------------------|----------------------|---------------------|---------------------|
| | | | | | |
| <i>Infer. præced. \square</i> | | | 87 22 $\frac{1}{4}$ | 58 34 $\frac{1}{2}$ | 58 34 |
| <i>Sequens præced.</i> | | 13 0 | 81 59 $\frac{1}{2}$ | 63 56 | 63 56 |
| | | Cauda δ occ. | | | |
| <i>Lucidior seq. \square</i> | 6 12 0 | 0 57 $\frac{1}{2}$ | 89 58 $\frac{1}{4}$ | 65 59 $\frac{1}{2}$ | 65 59 $\frac{3}{4}$ |
| | | Cor δ | | | |
| <i>Sequens quad. vrsæ</i> | 6 34 45 | 32 2 $\frac{1}{2}$ | 86 36 $\frac{1}{12}$ | 59 20 | 59 20 $\frac{1}{6}$ |
| <i>Præced. caudæ</i> | 7 15 25 | 42 21 | 87 43 $\frac{1}{12}$ | | |

Nota. Cauda δ erat vltra Merid. 0^g 57 $\frac{1}{2}$ ' quando lucidior in \square transiit Meridianum supra polum, ergo obseruetur cras D. V. vtriusque altitudo merid. & distantia per Sex. quæ si simul addita efficiunt 90, Quadrans & Sextans ambo instrumenta bene se habent, nec refraction in tam sublimi situ aliquid variat.

Obferuationes vespertinae stellarum in cauda Draconis
in minima sua altitudine.

| | | | Luc. γ or. | | | |
|------------------------|---------|--|---------------------|---------------------|---------------------|---------------------|
| <i>Extrema caudæ</i> | 5 50 55 | | 39 50 $\frac{1}{2}$ | 37 31 $\frac{1}{8}$ | 71 37 | 71 37 $\frac{1}{2}$ |
| <i>Sequens extrem.</i> | 7 0 7 | | 22 24 | 38 0 | 72 7 $\frac{1}{4}$ | 72 7 $\frac{1}{2}$ |
| | | | occ. | | | |
| <i>Tertia in cauda</i> | 8 37 10 | | 2 4 $\frac{1}{2}$ | 32 18 $\frac{1}{4}$ | 66 24 $\frac{1}{8}$ | 66 24 $\frac{1}{2}$ |

Obferuationes matutinae in maxima sua altitudine.

| | | | Cor. Ω occ. | | | |
|-------------------------|----------|----------------------|---------------------|----------------------|--------------------|---------------------|
| <i>Extrema caudæ</i> | 5 45 40 | | 19 42 $\frac{1}{2}$ | 74 20 $\frac{1}{12}$ | 71 36 | 71 35 $\frac{3}{4}$ |
| <i>Sequens extremam</i> | 5 55 0 | | 37 11 $\frac{1}{2}$ | 73 51 $\frac{1}{8}$ | 72 4 $\frac{1}{2}$ | 72 4 |
| | | | | | | |
| | | <i>Extrema caudæ</i> | | <i>Sequens</i> | | |
| <i>Declin.</i> | 71 35 37 | | | 72 4 20 | | |
| <i>Polus</i> | 55 55 45 | | | 55 55 40 | | |

Obferuationes stellarum Caſiopeæ vespertinae
in maxima sua altitudine.

| | | | Luc. γ a Mer. | | | |
|--------------------------------|---------|--|----------------------|---------------------|---------------------|---------------------|
| <i>Lucida Cathedræ</i> | 6 33 35 | | 28 59 $\frac{1}{2}$ | 89 3 | 56 52 $\frac{1}{2}$ | 56 52 $\frac{1}{8}$ |
| <i>XI^a Caſiopeæ</i> | 6 55 55 | | 23 27 | 85 16 $\frac{1}{8}$ | 60 39 | 60 39 $\frac{1}{2}$ |
| <i>Flexura Caſiop.</i> | 7 18 0 | | 17 48 | 87 28 | 58 28 | 58 28 $\frac{1}{2}$ |
| <i>Genu Caſiop.</i> | 7 45 0 | | 11 5 | 87 52 | 58 3 $\frac{1}{2}$ | 58 4 |
| <i>Lucidus pes Caſ.</i> | 8 10 45 | | 4 34 | 84 20 $\frac{3}{8}$ | 61 35 $\frac{3}{8}$ | 61 36 |

Cum per Meridianum tranſirent in minima ſua Altitudine.

| | | | Cauda Ω occ. | | | |
|------------------------|-----------|--|---------------------|---------------------|---------------------|---------------------|
| | | | 4 44 | | | |
| <i>Lucida Cathedræ</i> | 6 27 10 | | Cor Ω occ. | 22 49 $\frac{1}{4}$ | 56 55 | 56 55 |
| | | | 30 8 | | | |
| <i>Schedir Caſiop.</i> | 6 57 fere | | 37 36 | 20 13 | 54 19 | 54 19 $\frac{1}{4}$ |
| <i>Flexura Caſiop.</i> | 7 12 0 | | 41 28 $\frac{1}{2}$ | 24 24 $\frac{1}{8}$ | 58 29 $\frac{1}{2}$ | 58 30 |

Horologium in Meridie ſequentē iuſto tardius ibat 5 M. 8 S., qui error e Meridie antecedente hucusque proueniebat, et videbatur quadrans mane aliquid amiſiſſe in libella, ita vt altitudines quaſi $\frac{1}{2}$ ſcrupulo decliuiores oſtenderet.

DIE 2 DECEMBRIS.

Obferuationes ſtellarum Vrfæ maioris cum per meridianum tranſirent
in minima ſua altitudine.

| Tempus Horol. | Nomina ſtell. | Luc. γ or. | Altit. | Declinatio | |
|---------------|------------------------------|---------------------|---------------------|---------------------|---------------------|
| | | | | vno | altero |
| 5 10 55 | Infer. præc. in \square | 47 4 $\frac{1}{2}$ | 24 29 $\frac{1}{4}$ | 58 36 $\frac{1}{4}$ | 58 36 $\frac{1}{4}$ |
| 5 11 59 | Super. ex præc. in \square | 46 47 | 29 51 $\frac{5}{8}$ | 63 59 $\frac{1}{2}$ | 63 59 |
| 6 5 55 | Inferior ſeq. \square | 33 12 $\frac{1}{2}$ | 21 55 $\frac{1}{4}$ | 56 1 $\frac{1}{2}$ | 56 1 $\frac{3}{4}$ |
| 6 28 20 | Superior ſeq. \square | 27 33 | 25 15 $\frac{1}{2}$ | 59 22 | 59 22 $\frac{1}{2}$ |
| 7 9 10 | Prima caudæ | 17 16 | 24 8 $\frac{3}{4}$ | 58 15 | 58 15 |
| | Media caudæ | | 23 1 $\frac{1}{2}$ | 57 9 | 57 9 |
| | In Cauda Draconis | | Alt. minima | | |
| 5 40 4 | <i>Extrema caudæ</i> | | 37 30 $\frac{2}{3}$ | 71 36 $\frac{3}{4}$ | 71 37 |
| 6 52 0 | <i>Sequens</i> | | 37 59 $\frac{5}{6}$ | 72 7 $\frac{1}{2}$ | 72 7 $\frac{1}{8}$ |
| | <i>Caſiopeæ</i> | | | | |
| 6 22 30 | <i>Luc. Cathedræ</i> | 29 4 | 89 2 $\frac{3}{8}$ | 56 52 $\frac{1}{2}$ | 56 52 $\frac{3}{4}$ |
| | <i>Schedir Caſiop.</i> | | 88 23 $\frac{1}{8}$ | 54 16 $\frac{1}{2}$ | 54 16 $\frac{1}{4}$ |

Obferuationes ftellarum in capite Draconis pro fitu Armillarum
quo ad Meridianum.

| | | Declinatio | | Vesperī ad occ. | Mane ad or. ¹ |
|---------------------------|------------|------------|------------------|-----------------|--------------------------|
| | | | | | |
| Lucidioris iuxta oculum | Dec. die 1 | 51 | 35 | 51 35 | |
| | die 2 | 51 | 35 | vtrouque | |
| Alterius in genu Draconis | die 1 | 52 | 38 $\frac{3}{4}$ | 52 39 | |

Nota. Cape distantiam inter Schedir Caſiopeæ et ſtellam polarem exacte vtroque Sextante, quæ addita altitudini obſervatæ vtriusque ſi complet exacte ſemicirculum probat quadrantem recte ſe habere, nam hæc duæ ſtellæ fere ſimul meridianum tranſeunt, differentia ſaltem in æquatore $\frac{2}{3}$ minuti quod inſenſibiliter lineam variat.

Idem poteſt fieri in vna ex vrfæ maioris ſtellis cum cauda Ω , nam hæc etiam fere ſimul tranſeunt.

DIE 6 DECEMBRIS, VESPERI.

| | | |
|---------------------------|---------------------|---------------------|
| Prima \square Vrfæ mai. | 38 36 $\frac{1}{2}$ | 58 36 $\frac{3}{4}$ |
| Secunda \square | 63 59 $\frac{1}{2}$ | 63 59 $\frac{3}{4}$ |

N. B. Poſt exacte verificatam libellam Quadrantis.

| | | | | | |
|---|-------------------|---------------------|-------|---------------------|---------------------|
| 8 6 17 | Extrema caudæ | Luc. γ 3 23 | 17 20 | 51 27 $\frac{1}{4}$ | 51 27 $\frac{1}{2}$ |
| <i>Hinc verificetur etiam horologium quod non erat diu correctum.</i> | | | | | |
| 5 40 20 | Extr. caudæ Drac. | 39 44 $\frac{1}{2}$ | 37 31 | | |

DIE 15 DECEMBRIS

| | |
|--|----------------------------|
| 5 ^h 31' 42" Luc. Cathed. Caß. | |
| Alt. mer. | 89 3 |
| Declin. | vno 56 52 |
| Luc. γ or. 29 1 $\frac{1}{2}$ | altero 56 52 $\frac{1}{2}$ |

Nota. Caput Andromedæ tranſit Meridianum vna cum lucida Cathedræ fere. Obſervetur itaque earum distantia.

Decl. Arcturi iuxta Merid.

| | |
|---------------------------|----------------------------------|
| | vno 21 22 |
| | altero pinn. 21 22 $\frac{3}{4}$ |
| Repetita eadem Declinatio | 21 22 $\frac{1}{2}$ |
| | 21 22 $\frac{1}{8}$ |

atque hæc obſervatio melior priori.

*H. 7 22' 12" per minus horolog. Arc-
turus tranſiit per merid., tunc fuit
eius altit. 55 29 $\frac{3}{4}$*

*7 22 3 per maius Horolo-
gium per Muralem 55 28*

*Maius horologium nondum erat
fatis correctum.*

*Declin. per Armillas fatis bene
conuenit cum altitudine Arcturi per
Muralem.*

DIE 16 DECEMBRIS.

| | | Luc. γ occ. | | Alt. | Decl. |
|---------------------------------------|------------------------------|---------------------------|--------------------|--------------------|-------|
| 5 ^h . 3' 30" Lucidior ſeq. | | | | | |
| | | in \square vrf. mai. 21 | | 54 $\frac{5}{8}$ | |
| 6 37 37 | Media | | | | |
| | caudæ | 9 18 $\frac{1}{2}$ | 23 1 $\frac{1}{2}$ | 57 8 | |
| 6 31 35 | Genu | | | 57 7 $\frac{1}{2}$ | |
| | Caſiop. 11 0 | 87 52 | | 58 3 $\frac{1}{2}$ | |
| 6 45 | Alt. max. mediæ | | | 58 3 | |
| | caudæ vrf. mai. | 88 50 $\frac{1}{2}$ | | | |
| 6 57 20 | Luc. pes | 84 19 $\frac{1}{4}$ | | | |
| 7 10 $\frac{1}{2}$ | Alt. Mer. Max. extremæ caudæ | | | | |
| | vrfæ mai. verſus auſtr. | 85 31 | | | |
| 7 15 | Alt. Mer. Præc. | | | | |
| | in pede Boot. | 54 37 $\frac{2}{3}$ | | | |
| Decl. extremæ caudæ mane | | | | | |
| | vno pin. | 51 23 | | | |
| 7 34 6 | Mi. } Tranſiit Arc- | 55 29 $\frac{1}{3}$ | | | |
| 7 34 6 | Ma. } turus Merid. | 55 28 $\frac{1}{3}$ | | | |
| | habens Alt. | 55 28 $\frac{1}{6}$ | | | |

Deinde pro horologio

| Minus | Maius | Arctur. occ. |
|---------|---------|-------------------|
| 7 46 21 | 7 46 5 | 3 8 $\frac{1}{2}$ |
| 7 47 35 | 7 47 13 | 3 29 |
| 7 48 52 | 7 48 27 | 3 47 |
| 7 50 8 | 7 49 40 | 4 6 $\frac{1}{4}$ |

¹ Nullæ obſervationes ad ortum in codice.

DIE 26 DECEMBRIS.

H. 5 10 $\frac{3}{4}$ Fuit Schedir in Meridiano
habuitque altitud. 88 22 $\frac{1}{2}$

Distabat tunc lucida \vee

versus ortum 21 37

5 13 37 Stella polaris transiit Meri-
dianum & habuit alt. max. 58 51 $\frac{1}{2}$

Dist. lucidæ \vee a merid. 20 51

5 25 2 Flexuræ Caß.

alt. max. 87 27 $\frac{1}{2}$

Dist. luc. \vee a merid. 17 54 $\frac{1}{2}$

Alt. min. primæ caudæ

vrf. mai. 24 8 $\frac{3}{4}$

Declin. Schedir iuxta merid. supra

Polum per Armil- 54 16

las æquatorias alt. pinn. 54 16 $\frac{1}{4}$

Flexuræ Caßiopeæ Declin. 58 28

altero pinn. 58 27 $\frac{3}{4}$

5 52 30 Genu Caßiop.

alt. max. 87 52

Prima caudæ vrfæ mai. 58 20 $\frac{1}{2}$

decl. per Arm. altero 58 20 $\frac{1}{4}$

5 58 40 Med. caudæ vrfæ per Merid.

alt. minima 23 1

Lucid. \vee or. 9 31 $\frac{1}{2}$

Decl. per Arm., vtroque 57 8 $\frac{1}{2}$

Lucid. Erichon. vrf. ort.,

vtroq. 45 27 $\frac{3}{4}$

Altera in humero 44 48

Ericht. or. 44 48 $\frac{1}{2}$

6 18 0 Lucidus pes Caßiop. 84 19

Lucida \vee orient. 4 4

6 22 35 Extrema caudæ Vrfæ maioris

altit. minima 17 20

Lucida \vee or. 3 29 $\frac{1}{2}$

Extremæ caudæ vno 51 27

Declin. alt. pinn. 51 27 $\frac{1}{4}$

Lucidus pes Caßiopeæ 61 35

Declin. in alt. max. 61 35 $\frac{1}{2}$

Infra polum luc. \square vrf. min. 75 51 $\frac{3}{4}$

Vno pin. nam. alt. accipi non potuit.

Altera minus luci- vno 73 21

da in \square alt. 73 21 $\frac{1}{2}$

Erant tunc ambæ infra polum.

7 43 15 Lucida \square vrfæ min.

per Merid., Alt. 41 45 $\frac{1}{2}$

Lucid. \vee occ. 16 57

8 12 25 Sequens in vrfæ minore

per Merid., alt. 39 13 25

Lucida \vee a merid. 24 7

Declin. lucidæ Per- vno 48 19

fei circa Merid. altero 48 19

Postea pro verificatione instrumen-
torum obseruabatur distantia stella-
rum vt sequitur

Primo per Sextantem I 32 48 $\frac{1}{4}$

veterem inter Schedir II 32 48 $\frac{1}{4}$

& Polarem III 32 48 $\frac{1}{4}$

Nouo pinn. I 32 47 $\frac{3}{4}$

II 32 48

III 32 48 $\frac{1}{2}$

Secundo per

Sextantem I 32 48 $\frac{1}{4}$

nouum II 32 48 $\frac{1}{4}$

III 32 48

III 32 48 $\frac{1}{2}$

Postea accipiebatur distantia inter
lucidam Cathedræ & caput Andro-
medæ per eundem Sextantem vt se-
quitur.

Per Sext. nouum. Inter lucidam

Cathedræ & 30 1 $\frac{1}{2}$

caput And. 30 1 $\frac{1}{4}$

Per Sextantem veterem I 30 1 $\frac{3}{4}$

II 30 1 $\frac{1}{2}$

III 30 1 $\frac{1}{2}$

Hinc verificentur instrumenta.

Versus occasum

Declin. lucidæ Perfei vno 48 19 $\frac{1}{2}$

alt. pinn. 48 19 $\frac{1}{4}$

Declin. capitis Medusæ vno 39 18

alt. pinn. 39 18 $\frac{1}{2}$

Versus ortum

Decl. lucidæ in vno 75 51 $\frac{3}{4}$

\square vrfæ maioris altero 75 51 $\frac{1}{2}$

Decl. alterius vno 73 21

minus lucidæ alt. pinn. 73 20 $\frac{3}{4}$

Dist. inter lucidiorem ex sequentibus

in \square Vrfæ maioris 39 6 $\frac{1}{2}$

& caudam Ω per 39 6 $\frac{1}{4}$

Sextant. veterem 39 6 $\frac{1}{8}$

3 h 26' 20" Superior ex prioribus in \square

Vrfæ maioris habuit in Meridiano

altit. maximam 81 59 $\frac{1}{2}$

Declin. eiusdem vno 63 56

per Armillas alt. pinn. 63 56

3 28 25 Inferior præcedentium in \square

eiusdem Alt. max. 87 21 $\frac{1}{2}$

Declin. eiusdem vno pinn. 58 33 $\frac{1}{4}$

altero 58 33 $\frac{1}{2}$

- 4 17 10 Transiuit cauda Ω
per Merid., Alt. 50 59
Dist. tunc cor Ω
a merid. occ. 25 20 $\frac{1}{2}$
- 4 20 49 Lucida sequentium in \square vrfæ
mai. per Merid., alt. 89 57 $\frac{1}{6}$
Distabat tunc cor Ω
a Merid. 26 16 $\frac{1}{2}$
Declin. eiusdem vno 55 58 $\frac{1}{2}$
in \square Vrfæ alt. 55 58
- 4 35 40 Lucidæ Cathedræ in Merid.
altit. minima 22 49 $\frac{1}{6}$
Distabat cor Ω a Mer. occ. 30 1 $\frac{1}{4}$
Declin. eius vno pinn. 56 55
alt. 56 55 $\frac{1}{6}$
- 4 43 45 Sequens in \square vrfæ maioris
in Merid., Alt. max. 86 36 $\frac{1}{6}$
Distabat tunc cor Ω occ. 32 5
Declin. illius vno pinn. 59 20 $\frac{1}{2}$
altero 59 20
- 5 7 50 Schedir CaBiopeæ in Merid.
habuit Alt. minim. 20 12
Declin. eius vno 54 19
alt. pinn. 54 19 $\frac{1}{2}$
- 5 10 58 Altit. stellæ Pol. min. 52 59 $\frac{1}{2}$
Distabat cor Ω a Mer. occ. 38 43
- 5 21 18 Flexura CaBiopeæ per Merid.,
altit. minima 24 23 $\frac{3}{8}$
Cor Ω occ. 41 22
Declin. præcedentis vno 58 12
in cauda vrfæ mai. alt. 58 12 $\frac{1}{8}$
- 5 25 0 Præcedens caudæ vrfæ
maioris in altit. max. 87 43 $\frac{1}{2}$
Cor Ω occ. 42 22 $\frac{1}{2}$
Flexuræ CaBio- vno pin. 58 31
peæ declin. alt. 58 30 $\frac{3}{4}$
- 5 47 44 Genu CaBiopeæ
in Alt. minima 23 59 $\frac{1}{3}$
quo tempore distabat cor Ω
a mer. 48 2 $\frac{1}{4}$
- 5 56 8 Altit. mediæ in
cauda vrfæ mai. maxima 88 50
Cor Ω occ. 50 4
Declin. mediæ caudæ vno 57 6
in vrfæ maiore alt. 57 6 $\frac{1}{4}$
Declin. genu CaBiopeæ 58 6 $\frac{1}{2}$
- 6 13 58 Alt. min. lucid.
pedis CaBiop. 27 30 $\frac{3}{8}$
Cor Ω occ. 54 29 $\frac{1}{2}$

- 6 20 35 Extremæ caudæ Vrfæ maio-
ris austr. altit. maxima 85 30 $\frac{1}{2}$
Cor Ω a mer. occ. versus 56 9
- 6 24 20 Altit. lucidæ in pede
Bootis meridiana 54 36
Cor Ω occ. 57 5 $\frac{1}{2}$
Declin. extrem. in vno 51 53 $\frac{1}{2}$
cauda vrfæ mai. alt. 51 23 $\frac{1}{4}$
Declin. lucidi vno 61 37 $\frac{1}{2}$
pedis CaBiop. alt. 61 38
Dist. inter extre- I 30 53 $\frac{1}{2}$
mam caudæ vrfæ II 30 53
maioris & præced. III 30 52 $\frac{1}{2}$
in pede IIII 30 53 $\frac{1}{4}$
Bootis V 30 53 $\frac{1}{2}$

DIE 26 DECEMBRIS.

12^H 7' 31" Canis minor per merid.
altit. ipsius 40 18 $\frac{3}{8}$

Declin. vno 6 12
altero 6 12 $\frac{1}{2}$

DIE 27 DECEMBRIS A. M.

Pro Horologio examinando & So-
lis motu verificando obseruabatur
arcturus a Merid. in hunc modum.

| | | | |
|-------|---|---------------------------------|------------------------------------|
| dubia | { | 7 ^H 49' 55" Arcturus | 15 ^E 54 $\frac{1}{4}$ ' |
| | | 7 51 10 occident. | 16 14 |
| | | 7 52 17 | 16 30 $\frac{1}{2}$ |
| | | 7 53 12 | 16 43 $\frac{1}{2}$ |
| | | 7 55 5 | 17 11 |

Postea utroque Horologio

| Minus | Maius | Arcturus occ |
|----------|----------|---------------------------------|
| 7 56 35 | 7 57 10 | 17 34 |
| 7 57 56 | 7 58 40 | 17 55 |
| 7 59 29 | 8 0 24 | 18 16 |
| 8 1 12 | 8 2 15 | 18 40 |
| 8 2 51 | 8 4 8 | 19 13 $\frac{1}{2}$ |
| 11 55 25 | 11 50 52 | ☉ transiuit merid. ¹ |

DIE 27 DECEMBRIS P. M.

5^H 3' 20" Altit. maxima Schedir
CaBiopeæ versus Austrum 88 22 $\frac{1}{4}$
Tunc lucida \vee distabat a M. 21 28 $\frac{3}{8}$

5 6 10 Alt. max.
stellæ Polaris 58 51
Lucida \vee a Mer. 20 41

¹ Distantiæ æquatoris Veneris a meridiano supra p. 75 reperiuntur.

5 17 48 Alt. max.

Flexuræ Caß. 87 28

Lucida ∇ a Merid. 17 45 $\frac{1}{2}$

5 21 50 Alt. minima primæ

caudæ vrfæ maioris 24 8 $\frac{1}{2}$

5 45 0 Alt. max.

genu Caßiop. 87 52

5 52 38 Alt. minima mediæ

caudæ vrfæ maioris 23 1 $\frac{1}{2}$

6 11 30 Alt. max. pedis Caß. 84 20

6 17 55 Altit. minima extremæ

caudæ vrfæ mai. 17 20 $\frac{1}{6}$

6 23 45 Lucidus pes Androm.

per Merid., cuius Altit. erat 74 24 $\frac{3}{4}$

Declin. Schedir Caßiop.

vno 54 16

alt. 54 16 $\frac{1}{2}$

Declin. Flexuræ Caßiop.

vno 58 28

alt. 58 28 $\frac{1}{2}$

Declin. genu Caßiopæ vno 58 3 $\frac{1}{2}$

alt. 58 3 $\frac{1}{4}$

Declin. pedis Caßiopeæ

vno 61 35

alt. 61 35 $\frac{1}{4}$

7 26 0 Alt. mer. Lucidæ

Capitis Medusæ 73 23 $\frac{3}{4}$

7 39 43 Altit. merid. lucidæ

lateris Perfei 82 26

*Nota. Altit. omnes hoc die acceptæ
adhuc dimidio scrupulo abundant,
ergo Schedir erat* 88 21 45

Polaris 58 50 30

DIE 30 DECEMBRIS A. M.

| Minus | Maius | Arctur. occ. |
|------------------------|-----------------------|---------------------|
| 7 ^H 50' 12" | 7 ^H 50' 0" | 18 8 $\frac{1}{2}$ |
| 7 51 17 | 7 51 6 | 18 27 $\frac{1}{4}$ |
| 7 52 27 | 7 52 8 | 18 44 |
| 7 53 32 $\frac{1}{2}$ | 7 53 5 | 19 0 $\frac{1}{2}$ |
| 7 55 19 | 7 54 49 | 19 26 $\frac{1}{4}$ |
| 7 56 25 | 7 55 36 | 19 44 $\frac{1}{6}$ |
| 7 57 35 | 7 56 38 | 20 2 $\frac{1}{4}$ |
| 7 58 47 | 7 57 40 | 20 17 $\frac{1}{2}$ |
| 7 59 56 | 7 58 48 | 20 36 |
| 8 0 43 | 7 59 31 | 20 48 $\frac{3}{4}$ |

*Nota. Horologium verificabatur
iuxta horam 7^H 45^M, idque ad Arct.,*

*ponendo ipsius Asc. R. 209 15 $\frac{1}{2}$, ☉^{lis}
289 50.*

DIE 31 DECEMBRIS A. M.

Minus 7^H27' 52" }
Maius 7 38 0 } Arctur. occ. 11 4

Pro Asc. Recta Arcturi & horologio
simul examinando.

| Per minus | Cor Ω occ. | Arct. occ. |
|------------------------|---------------------|---|
| 7 ^H 34' 15" | 75 58 | 13 19 62 39 |
| 7 43 15 | 78 13 $\frac{1}{8}$ | 15 34 62 39 $\frac{1}{8}$ |
| 7 45 25 | 78 43 $\frac{1}{2}$ | 16 3 $\frac{3}{8}$ 62 39 $\frac{3}{8}$ |
| 7 48 12 | 79 25 $\frac{1}{2}$ | 16 47 $\frac{1}{4}$ 62 38 $\frac{1}{4}$ |

Pone hanc different. ascensionalem
inter Arcturum & cor Ω 62 39

| | | |
|---------|---------------|---------------------|
| 7 50 6 | Arcturus occ. | 17 16 $\frac{1}{4}$ |
| 7 50 45 | | 17 26 |
| 7 51 38 | | 17 39 |
| 7 52 26 | | 17 52 |
| 7 53 16 | | 18 4 |
| 7 54 27 | | 18 21 |
| 7 55 6 | | 18 30 $\frac{1}{2}$ |
| 7 56 40 | | 18 54 $\frac{1}{2}$ |
| 7 57 25 | | 19 6 |

DIE 31 DECEMBRIS P. M.

Post verificatum Q. vol. azimuthalem.

Genu Caßiopeæ altit. max. 87 51

Declin. eiusdem

per Armillas 58 3 $\frac{1}{2}$

altero 58 4

Mediæ caudæ vrfæ mai.

alt. min. 23 0 $\frac{3}{4}$

Declin.

vno 57 8 $\frac{1}{2}$

altero 57 8 $\frac{1}{4}$

Pedis Caßiopeæ alt. max. 84 19 $\frac{1}{2}$

H. 7 36' Lucidioris in \square vrfæ min.

alt. min. 41 44 $\frac{3}{4}$

Declin. eius

vno 75 52

altero 75 51 $\frac{1}{2}$

Altit. merid. lucidæ

later. Perfei 82 24 $\frac{5}{6}$

Declin. eius per Armill. 48 18 $\frac{1}{2}$

alt. pin. 48 18 $\frac{1}{4}$

8 6 0 Alterius in \square vrfæ min.

alt. min. 39 12 $\frac{3}{4}$

Declin. eius

vno 73 20

altero 73 20 $\frac{1}{4}$

| Stellæ polaris maximæ & minimæ Altitudines | | | | | | |
|--|---|---|-----------------------------------|---|---------------------------------|--------------|
| Vesperī | | | Menſe Decembri | | Mane | |
| Die | Tempus Horologij | Lucida γ a Mer. | Alt. max. | Tempus Horol. | Cor δ occ. | Alt. min. |
| 1 | 7 ^H 6 ^M 20 ["] | 20 ^G 47 ¹ / ₂ ^M | 58 ^G 51 ^M | 6 ^H 4 ^M 20 ["] | 39 ^G 32 ^M | ... |
| 2 | 7 0 | 19 35 | 58 50 ⁵ / ₈ | | | |
| 15 | 6 5 | 20 15 | 58 51 ¹ / ₂ | | | |
| 16 | 5 55 | 20 15 | 58 51 ¹ / ₈ | | | |

Pro ſitu Armillarum verſus Meridieꝝ lineam.

| Die 6 Decembris vſperi | | | 15 Decemb. | |
|--------------------------------------|-----------------|--|-----------------------------------|--|
| Lucida Perſej orientalis vno pinnac. | 48 18 15 | | 48 18 ¹ / ₂ | |
| | altero 48 17 45 | | 48 18 ¹ / ₄ | |
| Repetita minori- bus pinnacidijs | 48 18 30 | } meli- ores | | |
| | bis 48 18 5 | | | |
| Caput Meduſæ | Pone | 48 18 ¹ / ₂ vel ¹ / ₈ , bona | | |
| | vno | 39 16 40 | Die 15 Dec. 39 17 vtroque | |
| | altero | 39 16 20 | | |
| | Pone | 39 16 30 | | |

| Die 26 Decembris | | |
|------------------------------|--------|-----------------------------------|
| Lucida Perſej verſus occaſum | | |
| | vno | 48 19 ¹ / ₂ |
| | altero | 48 19 ¹ / ₄ |
| Caput Meduſæ | vno | 39 18 |
| | altero | 39 18 ¹ / ₆ |

*N. B. Differentia itaque vtrobique eſt quaſi vnus minuti, ideoque in di-
midio ſcrupulo armillæ in linea meridiana rectificandæ. Ita habeant hæ
ſtellæ lucida Perſej 48 19 & Caput Algol 39 17¹/₂ quando verſus ortum vel
occaſum fuerint, eademque reſpondet Perſej lucidæ circa meridiem.*

OBSERUATIONES STELLARUM IN ASTERISMIS AUSTRALI- BUS EXTRA ZODIACUM.

| DIE 13 JANUARIJ. | | altero pinn. 5 39 $\frac{1}{4}$ | |
|--|---------------------|---|------------------------------------|
| Sinifter pes Orionis in Meridie habuit | | per Quadr. | 5 41 $\frac{3}{8}$ |
| altitudinem per Quadr. | 25 21 | <i>Patet itaque quod adhuc differat Quadrans ab Armillis in Declin. quaſi per 2 Minuta.</i> | |
| Merid. Decl. eiusem | | | |
| per Arm., vno | 8 42 | | |
| | altero pinnac. | 8 42 $\frac{1}{4}$ | |
| | per Quadr. | 8 42 $\frac{1}{2}$ | |
| Sinifter humerus Orionis | | DIE 14 JANUARIJ. | |
| per Quadr. | 39 59 | | |
| Declin. eiusem | | Superior duarum in exuvijs | |
| | per Armillas | 5 55 $\frac{1}{2}$ | γ quas tenet Orion |
| Alt. lucidæ in extremitate | | per Quadr. Volub. | 40 14 45 |
| Eridani per Quadr. | 28 23 $\frac{5}{6}$ | per Sext. | 40 16 0 |
| Declin. eiusem | | Eiuſdem declin. | |
| | per Armill. | 5 39 $\frac{1}{2}$ | per Armill., vno 6 10 B. |
| | | | altero pinnac. 6 9 $\frac{3}{4}$ |
| | | | Sed hic per Sext. nouum declinatio |

vifa est ½ scrupulo maior, cum tamen per Armillas alias maior fuerit debito, sed quia stella erat tam parua, non multum huic obseruationi tribuendum.

Primæ Eridani alt. merid.

per Sext. nouum 28 25

per Q. Volub. 28 24½

Declin. per Armillas 5 40

alt. pinnac. 5 40½

Luc. pes Orionis per Quadr. 25 20½

per Sext. 25 21½

Declin. 8 43½

alt. pinnac. 8 43½

per Sext. 8 44

Alt. merid. Sinist. humeri

Orionis per Sext. 40 0

per Q. Volub. 39 59

Decl. per Sext. nou. 5 54 30

per Armill. vtroque 5 54

Patet itaque quod Sextans nouus vbique fere declinationem ½ Minuto maiorem ostendat quam armillæ ipsæ, licet Armillæ heri antequam corrigerentur plus iusto in declinatione exhiberent. Quadrans minus habet tere vno scrupulo.

Lucidus humerus Orionis

in merid. per Q. Volub. 41 20

per Sext. 41 21

Declin. eius per Armill. 7 15

alt. pinnac. 7 16½

Non erat satis serenum.

DIE 15 JANUARIJ.

Prima Eridani in mer.

per Sext. Δ 28 25½

per Q. Vol. 28 25

Declin. per Armill.,

vtroque pinn. 5 40½

Sinist. hum. Orion.

per Q. Vol. 40 0

per Sext. 40 1

Decl. per Armill. mai. subterr.

vtroque pinn. 5 54

Prima Balthei Orion.

per Q. Vol. 33 25½

exquisite conuenit cum declinatione
per Sext. 33 26

Declin. Merid. per Arm.,

vtroque 0 40

Secunda in Baltheo

per Quadr. 32 33½

per Sext. 32 34

Decl. per Arm. vnico

tantum pinn. 1 30½

Tertia in Baltheo per Quadr. 31 51½

per Sext. nou. 31 52½

Declin. eiusdem vno pinn. 2 13

per Armill. alt. pinn. 2 12½

Lucid. humer. per Q. Volub. 41 21

Orion. in per Sext. 41 21½

Merid. per Q. Tich. 41 20½

Declin. eiusdem vno pinn. 7 15

per Armill. alt. pinn. 7 14½

Si itaque dexter humerus Orionis habet altit. Meridianam 41 21, fuit ipsius declin. 7 15½, cum tamen armillæ tantum non dederint. Vnde Quadrans Volubilis hoc loco ipsas Armillas exsuperat in Borea declinatione.

Eodem die 15 Januarij ad Vesperas factæ sunt hæ obseruationes per Q. Tichonicum. Altit. merid. tertiæ & lucidæ in exuvio γ quod tenet Orion

40 15½

Lucida Erid. supra

pedem Orion. 28 24½

Lucidus pes Orionis 25 21½

Sinister humerus Orionis 39 59½

Prima in Baltheo 33 24½

Media in Baltheo 32 33½

Vltima in Baltheo 31 51½

Dexter pes Orionis 24 14

Canis maior in Merid.

per Q. Volub. 17 54½

per Sext. Nou. 17 55

Declin. eiusdem vno 16 10½

alt. pinn. 16 11

Alt. lucidæ hydræ

per Sext. Δ 27 13

Declin. eius per Armill. 6 53½

alt. pinn. 6 54

DIE 16 JANUARIJ.

Prima Eridani

per Q. volub. 28 24½

per Sext. nou. 28 25 30

Declin. per vno pin. 5 40½ } satis
Armillas alt. pinn. 5 41 } bene
 Alt. per Q. Tich. 28 24½
 per Sext. vet. 28 25
 Lucida in exuvio per Q. Tich. 40 14½
 Lucidus pes Orionis
 per Q. Tich. 25 21¼
 per Sext. vet. 25 21⅓
 per Q. Volub. 25 21¼
 per Sext. nou. 25 21 50
Declin. vno 8 43⅓ } medio-
alt. 8 43⅓ } cris
 Sinister humer. Orion.
 per Q. Tich. 39 59¼
 per Sext. vet. 40 0½
 per Q. Volub. 39 59 50
 per Sext. nou. 40 0 10
Declin. per Armill. I pinn. 5 53½
II pinn. 5 53
 I Balthei Orion.
 per Sext. vet. 33 26
 per Q. Volub. 33 25⅓
 per Sext. nou. 33 25½
Declin. per Armillas
maiores 0 40
alt. pinnac. 0 39 45
 II Balthei Orion.
 per Q. Tich. 32 33½
 per Sext. vet. 32 34
 per Sext. nou. 32 34 30
 per Q. Volub. 32 33 15
Declin. vno pinnac. 1 31 0
altero 1 30 50
 III Balthei Orion.
 per Q. Tich. 31 51½
 per Sext. vet. 31 51⅓
 per Sext. nou. 31 52⅓
 per Q. Volub. 31 51⅔
 Declin. per Armill. I pinn. 2 13¼
 subterr. maiores II pinn. 2 13⅓
 Dexter pes Orionis
 per Q. Tich. 24 13
 per Sext. vet. 24 13
 per Q. Volub. 24 13
 per Sext. nou. 24 14
Declin. I pinnac. 9 52
II pinnac. 9 51½
 Dexter humer. Orion.
 per Q. Tich. 41 20½
 per Sext. vet. 41 21⅓

per Q. Volub. 41 20½
per Sext. nou. 41 21⅔
 Declin. I pinnac. 7 15 0
 II pinnac. 7 16
 Pes Canis maioris per Q. Tich.
 vtroque pinnacid. 16 18
 per Sext. vet. 16 19½
 per Q. Volub. 16 18¼
 per Sext. nou. 16 19
 Declin. per Armill. 17 46½
 Canis maior per Q. Tich.
 vtroque pinnac. 17 54
 per Sext. vet. 17 55¼

DIE 21 JANUARIJ.

Lucida Ceti in Merid.
 per Q. Tich. 36 30
 Sinister pes Orion.
 per Q. Tich. 25 21⅓
 vtroque pinn.
 Sinister humer. Orion. Q. Tich. 39 59¼
 altero pinnac. 40 0
 per Sext. vet. 39 59
 per Sext. nou. 39 59¾
 Declin. per Armill., vtroque 5 54
 I Balthei Orion.
 per Q. Tich. 33 25½
 alt. pinn. 33 25⅓
 per Sext. vet. 33 25
 II Balthei Orion.
 per Q. Tich. 32 33½
 alt. pinn. 32 33½
 per Sext. Nou. 32 33¾
 per Sext. Vet. 32 33⅓
 III in Baltheo per Q. Tich. 31 52¼
 alt. pinn. 31 52⅓
 per Sext. vet. 31 51¼
 per Sext. nou. 31 52
 Dexter pes Orion.
 per Q. Tich. 24 13
 alt. pinnac. 24 13½
 Varietatem obseruationis peperit (C
 splendor in centro.
 per Sext. nou. 24 14
 Dexter humer. Orion.
 Q. Tich. 41 21
 alt. pinnac. 41 20¾
 per Sext. nou. 41 22

| | |
|--------------------------|---------------------|
| Pes Canis maior. in Mer. | |
| per Q. Tich., incerta | 16 10 |
| Canis maior in Mer. | 17 54 $\frac{1}{2}$ |
| alt. pinnac. | 17 54 $\frac{1}{2}$ |
| per Sext. nou. | 17 54 $\frac{2}{3}$ |

DIE 23 JANUARIJ.

| | |
|-------------------------------|---------------------|
| Lucida Ceti per Q. Tich. | 36 30 $\frac{2}{3}$ |
| alt. pinn. | 36 30 $\frac{1}{2}$ |
| Prima Eridani per Q. Tich. | 28 24 $\frac{1}{2}$ |
| vtroque pinn. | |
| Sinifter pes Orion. | |
| per Q. Tich. | 25 21 $\frac{1}{3}$ |
| alt. pinn. | 25 21 $\frac{1}{2}$ |
| Sinift. hum. Orion. | |
| per Q. Tich. | 39 59 $\frac{1}{3}$ |
| alt. pinnac. | 39 59 $\frac{1}{4}$ |
| I Balthei Orionis | 33 26 $\frac{1}{2}$ |
| II Balthei per Q. Tich. | 32 33 $\frac{1}{2}$ |
| III Balthei Orionis | 31 51 $\frac{2}{3}$ |
| Pes Canis maioris per Tichon. | 16 18 $\frac{2}{3}$ |
| alt. pinnac. | 16 18 $\frac{1}{2}$ |
| Canis maior per Q. Tichon. | 17 54 $\frac{3}{4}$ |
| alt. pinnac. | 17 54 $\frac{1}{2}$ |
| per Sext. nou. | 17 54 |
| per Sext. vet. | 17 55 |

DIE 1 FEBRUARIJ.

| | |
|-----------------------------------|---------------------|
| Lucida in extremitate Eridani | |
| per Q. Tichon. | 28 24 $\frac{1}{3}$ |
| altero pinn. | 28 24 $\frac{1}{2}$ |
| Sinifter pes Orion. per Tich. | 25 21 10 |
| vtroque pinn. | |
| Sinifter humer. Orionis | 39 59 25 |
| Prima Balthei per Q. Tich. | 33 25 10 |
| Media Balthei | 32 33 20 |
| III Balthei vno pinnac. | 31 51 30 |
| altero | 31 51 35 |
| Declin. eius per Armill. | 2 13 20 |
| Dexter pes Orion. | |
| per Q. Tich. | 24 13 $\frac{1}{4}$ |
| per Sext. nou. | 24 13 $\frac{1}{3}$ |
| Declin. eius per Armill. | 9 52 |
| alt. pinnac. | 9 51 $\frac{3}{4}$ |
| Luc. humerus Orionis per Q. Tich. | |
| vtroque pinn. | 41 20 $\frac{1}{4}$ |
| per Sext. nou. | 41 20 $\frac{1}{4}$ |
| per Sext. vet. | 41 20 $\frac{1}{6}$ |
| Declin. eius per Armill. | 7 15 $\frac{1}{4}$ |
| altero pinnac. | 7 15 $\frac{1}{2}$ |

DIE 3 FEBRUARIJ AD VESPERAS.

| | Per Q. Tichon. | | | Per Sext. | | Per Sext. | Decl. per Armill. | |
|---------------------|---------------------|---------------------|---------------------|-----------------------|---------------------|---------------------|-------------------|--------|
| | vno | altero | | nou. | | vet. | vno | altero |
| Lucid. pes Orion. | 25 21 5 | vtroque | 25 22 | 25 21 55 | 8 44 | vtroque | | |
| Sinift. hum. Orion. | 39 59 25 | vtroque | 40 0 | 39 59 $\frac{2}{3}$ | 5 53 $\frac{1}{2}$ | 5 54 | | |
| Prima Balth. Orion. | 33 25 0 | vtroque | 33 26 $\frac{1}{2}$ | 33 26 | 0 40 | vtroque | | |
| Media Balthei | 32 33 25 | | 32 34 $\frac{1}{2}$ | 32 34 0 | 1 31 $\frac{1}{4}$ | vtroque | | |
| Repetita | | | | | 1 31 0 | 1 32 | | |
| III Balth. Orion. | 31 51 30 | vtroque | 31 52 50 | 31 52 0 | 2 13 $\frac{1}{4}$ | vtroque | | |
| Repetita | | | | | 2 14 | 2 14 M. | | |
| Dexter pes Orion. | 24 13 10 | 24 13 5 | | | | | | |
| Dext. humer. Orion. | 42 20 10 | vtroque | 41 21 | 41 20 $\frac{2}{3}$ | 7 14 $\frac{1}{2}$ | 7 15 | | |
| Pes Canis maioris | 16 18 $\frac{1}{2}$ | 16 18 $\frac{1}{2}$ | 16 19 $\frac{5}{8}$ | 16 19 $\frac{3}{4}$ | 17 47 $\frac{1}{2}$ | 17 47 $\frac{1}{4}$ | | |
| Canis maior | 17 54 5 | 17 54 10 | 17 55 $\frac{2}{3}$ | 17 55 $\frac{1}{4}$ * | 16 10 | 16 10 $\frac{1}{4}$ | | |

*Non erat bene ad Merid. collocatus.

DIE 7 FEBRUARIJ.

| | Per Q. Tichon. | | Per Sext. | | Per Sext. | |
|-----------------------|----------------|----------|---------------------|---------------------|-----------|--|
| | vno | altero | nou. | vet. | | |
| Lucida Eridani | 28 24 40 | 28 24 45 | 28 25 | 28 24 $\frac{1}{2}$ | | |
| Sin. pes Orionis | 25 21 | vtroque | 25 22 $\frac{1}{2}$ | 25 21 $\frac{3}{4}$ | | |
| Sin. hum. Orion. | 39 59 20 | 39 59 25 | 40 0 | 39 59 | | |
| Prima Balthei | 33 25 | | 33 26 | 33 25 | | |
| Secunda Balthei | 32 33 5 | | 32 34 $\frac{1}{3}$ | 32 33 $\frac{3}{4}$ | | |
| Tertia | 31 51 35 | vtroque | 31 52 $\frac{1}{2}$ | 31 51 $\frac{1}{2}$ | | |
| Dexter pes Orion. | 24 13 5 | 24 13 | 24 14 $\frac{3}{4}$ | 24 14 | | |
| Dexter humerus | 41 20 20 | 41 20 15 | 41 21 $\frac{1}{2}$ | 41 21 | | |
| Pes Canis maioris | 16 18 | vtroque | 16 19 $\frac{3}{4}$ | 16 19 $\frac{1}{2}$ | | |
| Canis maior | 17 54 30 | 17 54 35 | 17 55 $\frac{5}{8}$ | 17 54 $\frac{5}{8}$ | | |
| Oculus Hydræ | 41 57 30 | 41 57 40 | | | | |
| Auris Hydræ | 41 32 50 | vtroque | | | | |
| Lucida Hydræ | 27 11 25 | 27 11 20 | | | | |
| In coruo, ala finist. | 18 51 10 | | | | | |
| In coruo, ala dext. | 19 54 | 19 54 5 | | | | |
| In pede corui | 13 1 40 | | | | | |

Decl. per Arm. 21 13 $\frac{1}{2}$

DIE 13 FEBRUARIJ.

| | Per Q. Tichon. | | Per Sext. | | Per Sext. | | Decl. per Armill. | |
|----------------------|----------------|----------|---------------------|---------------------|--------------------|--------------------|-------------------|--|
| | vno | altero | nou. | vet. | vno | altero | | |
| Lucida in Eridano | 28 24 40 | 28 24 45 | | | | | | |
| Sinister pes Orion. | 25 21 0 | 25 21 10 | 25 22 | | | | | |
| Sin. humer. Orion. | 39 59 20 | 39 59 25 | 40 0 | 40 0 | 5 54 | vtroque | | |
| Prima Balthei | 33 25 0 | 33 25 10 | 33 26 | 33 25 $\frac{1}{2}$ | 0 40 | 0 40 $\frac{1}{4}$ | | |
| Media Balthei | 32 33 10 | vtroque | 32 34 | 32 33 $\frac{5}{8}$ | 1 31 $\frac{1}{2}$ | 1 31 $\frac{1}{8}$ | | |
| Tertia Balthei | 31 51 35 | vtroque | 31 52 $\frac{1}{8}$ | 31 52 $\frac{1}{2}$ | 2 14 | 2 13 $\frac{1}{2}$ | | |
| Dexter pes Orion. | 24 13 15 | 24 13 0 | 24 13 $\frac{5}{8}$ | 24 14 $\frac{1}{4}$ | 9 52 $\frac{1}{2}$ | 9 52 $\frac{1}{4}$ | | |
| Bellatrix | 41 20 20 | | 41 20 $\frac{1}{8}$ | 41 21 | 7 14 $\frac{1}{2}$ | 7 14 $\frac{5}{8}$ | | |
| Pes Canis maioris | | | 16 19 $\frac{1}{4}$ | | | | | |
| Præced. in ala corui | | | 18 53 $\frac{1}{2}$ | | | | | |
| Sequens in alâ corui | | | 19 55 $\frac{5}{8}$ | | | | | |

DIE 4 MARTIJ.

Altitudines Meridianæ

| | | |
|----------------------------|--------------------|--|
| In capite Hydræ | | |
| per Q. Tich. | 41 57 | |
| alt. pinnac. | 41 57 20 | |
| In capite Hydræ | | |
| per Q. Tich. | 41 32 30 | |
| | 41 32 20 | |
| In collo Hydræ per Tichon. | 38 6 $\frac{1}{2}$ | |
| Lucida Hydræ per Tichon. | 27 11 20 | |

DIE 5 MARTIJ.

| | | |
|---------------------------|-------|--|
| Canis maior per Q. Volub. | 17 54 | |
| Stella præcedens hydram | | |
| per Q. Volub. | 41 11 | |

| | | |
|----------------------------|---------------------|--|
| Declin. eius per Armill. | 7 5 | |
| Nasus hydræ per Q. Tich. | 38 50 $\frac{2}{3}$ | |
| per Q. Volub. | 38 49 $\frac{2}{3}$ | |
| Declin. per Armill. | 4 44 $\frac{1}{2}$ | |
| Faux hydræ per Q. Tich. | 38 55 $\frac{1}{2}$ | |
| per Q. Volub. | 38 55 | |
| Declin. per Armill. | 4 50 $\frac{1}{2}$ | |
| Occiput hydræ per Q. Tich. | 41 57 $\frac{1}{2}$ | |
| per Q. Volub. | 41 57 | |
| Declin. per Armill. | 7 53 | |
| Auris hydræ per Volub. | 41 22 | |
| Lucida colli per Q. Tich. | 41 32 $\frac{5}{8}$ | |
| per Q. Volub. | 41 33 $\frac{1}{2}$ | |
| Declin. per Armill. | 7 28 | |
| Lucida hydræ | | |
| per Q. Tichon. | 27 11 $\frac{1}{8}$ | |

Lucida in collo Hydræ
per Q. Volub. 38 4 $\frac{3}{4}$
non satis exacte
Declin. per Armill. 4 1 $\frac{1}{4}$

DIE 26 MARTIJ.

Lucida Hydræ per Q. Vol. 27 11 $\frac{1}{4}$
per Sext. nou. 27 11 $\frac{1}{2}$
Declin. per Armill. 6 53 $\frac{1}{2}$

DIE 8 NOUEMBRIS A. M.

Tertia in Baltheo Orionis habuit
Altit. Merid. per Q. 31 52
Declin. eius per Armill. 2 14 M.
Dexter humer. Orion. in Mer. 41 21
Declin. eius per Armill. 7 15
altero pinn. 7 14 $\frac{5}{8}$

Anno 1525 Fruenburgi¹
vbi Polus eleuatur Part. 54 M. 22 $\frac{1}{4}$ erat
Alt. Merid. Spicæ \mathbb{M}
Copernico 27 0
Ergo Declin. Spicæ Auftr. 8 37 $\frac{1}{4}$
Latitudo eius 1 59 $\frac{1}{2}$ M.
Vnde prouenit Longitudo
in 17 53 55 $\underline{\Omega}$

Ergo annis circiter 61 mutauit Spica \mathbb{M} Longitudinem 50 Min. 29 Sec., vt ob id vnus gradus Longitud. abfoluatur annis 72 & $\frac{1}{2}$ fere. Per exacta instrumenta.

N. B. Sed exactior ratio constituit declinationem in 8° 57' 0" eo quod Altitudo maxima reperiatur hoc anno 25 8 $\frac{1}{2}$ & æquatoris 34 5 $\frac{1}{2}$. Ideoque Longitudo Spicæ erit in huius anni 86 fine in 18° 4' $\underline{\Omega}$ satis præcise, nam conuenit hæc ratio cum loco inferioris capitis \mathbb{II} quem ex obferuationibus anni 82 ex ♀ vespertina a Sole ad Stellas comparata & anno 85 eadem matutina simili modo & viceversa esse comprobauimus in fine huius anni 17° 31' $\underline{\Omega}$. His itaque satis tuto cætera omnia fundantur.

LOCA ALIQUOT FIXARUM ANNO 1586 MENSE OCTOBRI.

Lucidæ Capitis \mathbb{V}
Ascensio R. lucidæ \mathbb{V} 26° 3'
Declinatio Bor. 21 28 $\frac{1}{2}$
Hinc fit eius
Longitudo 1° 55 $\frac{1}{2}$ ' \mathbb{Y}
Latitudo 9 56 $\frac{1}{2}$ Sept.

Post verificatas Armillas
Canis maior in Meridiano 17 53 $\frac{3}{8}$
Decl. eius per Armill. vno 16 11 $\frac{1}{2}$
altero 16 12
Femur Canis maioris in Mer. 5 44 $\frac{1}{4}$
Venter Canis maioris in Mer. 10 51
Declin. eiusdem per Armill. 23 14
Illa quæ proxime sequitur
in Cane maiore 8 21 $\frac{3}{4}$
Declin. eius per Armillas 25 44 $\frac{1}{2}$
Canis minor 40 18 $\frac{5}{8}$
Declin. eius, vtroque pinn. 6 13 $\frac{3}{8}$
H. 5 35' tranfuit Lucida Hydræ
per Meridianum, habuitque
Alt. Merid. per Volub. 27 11
Declin. eius per Armillas 6 54 M.
alt. pinn. 6 54
Declin. per Quadrantem 6 54 $\frac{1}{2}$

Anno 1586 hic Vraniburgi
inuenta est
Declin. Spicæ 8 57 10
Latit. Merid. 1 59 30
Longitudo 18 4 24 $\underline{\Omega}$

Aldeboram
Ascensio R. Oculi \mathbb{Y} 63 6
Declinatio B. 15 36 $\frac{1}{2}$
Resp. Longitudo 4° 2' \mathbb{II}
Latitudo 5 30 $\frac{1}{2}$ Mer.

¹ E codice V. Cf. Copern. De revol. III. (Ed. sec. p. 160) Progymn. p. 220 (Opera T. II p. 222).

Herculis

Meridionalis capitis II

| | |
|-----------------|------------|
| Afc. R. | 109° 59½' |
| Declinatio B. | 28 56½ |
| Resp. Longitudo | 17 31½ ☉ |
| Latitudo | 6 38½ Bor. |

Cordis ☉

| | |
|-----------------|-------------|
| Afcensio R. | 146 35½ |
| Declinatio B. | 13 57½ |
| Resp. Longitudo | 24 7 ☉ |
| Latitudo | 0 27½ Sept. |

Spicæ ♄

| | |
|-----------------|-------------|
| Afcensio R. | 195 54 |
| Declinatio Mer. | 8 57 |
| Longitudo Spicæ | 18° 5' 0" ☊ |
| Latitudo | 1 59½ Mer. |

Nota. Si Spica ♄ habuit tempore Ptolomej latitudinem p. 2.0, oportet eam nunc ob mutationem obliquitatis signiferi habere eandem 2.6.

Lucidæ Vulturis

| | |
|-----------------|-------------|
| Afcensio R. | 292° 41' |
| Declinatio B. | 7 51½ |
| Resp. Longitudo | 26° 0' 0" ☊ |
| Latitudo | 29 20 35 B. |

Examen

inuentarum longitudinum

Diff.^{ia} longitudinis

Sig. G.

| | |
|----------------------------|--------------|
| A Vulture ad lucidam V | 3 5 55' |
| A lucida V ad oculum ☿ | 1 2 7 |
| Ab oculo ☿ ad mer. cap. II | 1 13 30 |
| A mer. capite II ad cor ☉ | 1 6 35 |
| A corde ☉ ad spicam ♄ | 1 23 58 |
| A spica ad Vulturem | 3 7 55 |
| | <hr/> 12 0 0 |

Lucida Vulturis in Octobri 1586 ☊ 26 0. 9 anni dant 7½', subtrahere itaque oportet pro anno 77 quo cometa apparuit 7½ — 25 52½. Iuxta reiteratam considerationem habito respectu anni 1585 quo distantia etiam a Vulture capiebatur esset longitudo Vulturis stellæ anno 1585 in Septembri 25 58 20. Colligitur quod in Septembri anni 1577 fuerit longitudo Vulturis in 25 51 40, ergo in Nouembri 25 51 50. Si posueris 25 52 insensibiliter aberrabis in singulis, verum si posueris 25 51 melius quadrabit cum prima alæ et proxime accedet ad correctionem anni 85.

ANNO 1586.

| | Afcensio Recta | Punctum culm. | Tempus |
|---------------------------|----------------|---------------|------------------------------------|
| Lucidæ cap. V | 26° 3' | 28° 3' V | 1 ^h 44 ^m 11" |
| Oculi ☿ | 63 6 | 5 3 II | 4 12 25 |
| Calcis pedis II | 89 30 | 29 33 II | 5 58 2 |
| Inferioris cap. II | 109 59½ | 18 28 ☉ | 7 20 1 |
| Cordis ☉ | 146 35 | 24 16 ☉ | 9 46 18 |
| Spicæ ♄ | 195 54 | 17 15 ☊ | 13 3 36 |
| Lucidæ Vulturis | 292 41 | 20 58½ ☊ | 19 30 41 |
| 1 ^a Alæ Pegasi | 341 5 | 9 31 X | 22 44 19 |

RECAPITULATIO

QUARUNDAM ALTITUDINUM MERIDIANARUM & DECLINATIONUM
FIXARUM CUM LIMITATIONIBUS AD ANNUM 1586.

| | | Altitudines Meridianæ | | | |
|----------|-------------------------|-----------------------|----------------------|---------------------|---------------------|
| JANUARIJ | | Per Q. Tich. | Volub. | Sext. nou. | Sext. Δ vet. |
| Die 15 | Pectus γ | 45 21 | 45 21 | 45 21 $\frac{1}{4}$ | |
| | Oculus γ | 49 41 $\frac{2}{3}$ | 49 41 $\frac{1}{12}$ | 49 42 | 49 42 |
| | Prima Eridani | 28 24 $\frac{2}{3}$ | 28 25 | 28 25 $\frac{1}{4}$ | 28 24 $\frac{1}{8}$ |
| | Lucidus pes Orionis | 25 21 $\frac{1}{2}$ | 25 21 | 25 21 $\frac{3}{8}$ | 25 21 $\frac{1}{8}$ |
| | Sinister hum. Orionis | 39 59 $\frac{1}{2}$ | 40 0 | 40 1 | 40 0 $\frac{1}{8}$ |
| | Prima balthej Orionis | 33 24 $\frac{1}{2}$ | 33 25 $\frac{1}{2}$ | 33 26 | 33 25 |
| | Secunda balthej Orionis | 32 33 $\frac{1}{2}$ | 32 33 $\frac{1}{4}$ | 32 34 | 32 33 |
| | Tertia balthej Orionis | 31 51 $\frac{1}{2}$ | 31 51 $\frac{1}{8}$ | 31 52 | 31 51 |
| | Luc. humerus Orionis | 41 20 $\frac{2}{3}$ | 41 21 | 41 21 $\frac{3}{4}$ | 41 21 |
| Die 16 | Oculus γ | 49 41 $\frac{5}{6}$ | 49 41 | 49 42 $\frac{1}{3}$ | 49 42 |
| | Prima Eridani | 28 24 $\frac{1}{3}$ | 28 24 $\frac{1}{2}$ | 28 25 $\frac{1}{2}$ | 28 25 |
| | Lucidus pes Orionis | 25 21 $\frac{1}{4}$ | 25 21 $\frac{1}{4}$ | 25 21 $\frac{5}{8}$ | 25 21 $\frac{1}{3}$ |
| | Sinister hum. Orionis | 39 59 $\frac{1}{4}$ | 39 59 $\frac{3}{8}$ | 40 0 $\frac{1}{8}$ | 40 0 $\frac{1}{2}$ |
| | Prima balthej Orionis | | 33 25 $\frac{1}{8}$ | 33 25 $\frac{1}{2}$ | 33 26 |
| | Secunda balthej Orionis | 32 33 $\frac{1}{3}$ | 32 33 $\frac{1}{4}$ | 32 34 $\frac{1}{2}$ | 32 34 |
| | Tertia balthej Orionis | 31 51 $\frac{1}{2}$ | 31 51 $\frac{2}{3}$ | 31 52 $\frac{1}{3}$ | 31 51 $\frac{1}{3}$ |
| | Dexter hum. Orionis | 41 20 $\frac{1}{2}$ | 41 20 $\frac{2}{3}$ | 41 21 $\frac{2}{3}$ | 41 21 $\frac{1}{3}$ |
| | Pes Canis maioris | 16 18 | 16 18 $\frac{1}{4}$ | 16 19 | 16 19 $\frac{1}{2}$ |

LIMITATIO ANTECEDENTIUM OBSERVATIONUM
CONSIDERATIS SINGULIS NOSTRIS.

| | Die 15 | Die 16 | Conuenientes ex vtrisque |
|--------------------------|---------------------|---------------------|-----------------------------|
| Pectus γ | 45 21 $\frac{1}{8}$ | | 45 21 $\frac{1}{8}$ |
| Aldeboran | 49 41 $\frac{1}{2}$ | 49 41 $\frac{3}{4}$ | 49 41 $\frac{1}{8}$ |
| Prima Eridani | 28 25 | 28 25 | 28 25 |
| Lucidus pes Orionis | 25 21 $\frac{1}{2}$ | 25 21 $\frac{1}{2}$ | 25 21 $\frac{1}{2}$ |
| Sinister humerus Orionis | 40 0 | 40 0 | 40 0 |
| Prima balthej Orionis | 33 25 $\frac{1}{2}$ | 33 25 $\frac{1}{8}$ | 33 25 $\frac{1}{8}$ |
| Secunda balthej | 32 33 $\frac{1}{2}$ | 32 33 $\frac{3}{8}$ | 32 33 35 |
| Tertia balthej | 31 51 $\frac{1}{2}$ | 31 51 $\frac{3}{8}$ | 31 51 35 |
| Lucidus humerus Orionis | 41 21 | 41 20 $\frac{3}{8}$ | 41 20 55 |

| | | Declinatio per Armillas subtr. | | |
|--------|-------------------------|--------------------------------|---------------------|------------------------|
| | | Uno | Altero | Medium |
| Die 15 | Pectus γ | 11 15 $\frac{1}{8}$ | 11 15 $\frac{1}{4}$ | 11 15 12 $\frac{1}{2}$ |
| | Aldebaran | 15 36 | 15 35 $\frac{1}{4}$ | 15 35 37 $\frac{1}{2}$ |
| | Prima Eridani | 5 40 $\frac{1}{2}$ | | |
| | Lucidus pes Orionis | 8 44 | 8 43 $\frac{3}{8}$ | 8 43 55 |
| | Sinister humerus Orion. | 5 54 | 5 54 | 5 54 |
| | Prima balthej Orion. | 0 40 | 0 40 | 0 40 |
| | Secunda balthej | 1 30 $\frac{1}{2}$ | | |
| | Tertia balthej | 2 13 | 2 12 $\frac{3}{8}$ | 2 12 55 |
| | Luc. humerus Orionis | 7 15 | 7 14 $\frac{1}{2}$ | 7 14 $\frac{3}{4}$ |

Declinatio per Armillas sub.

| | Uno | Altero | Medium |
|-------------------------|--------------------|---------------------|-----------------------|
| Die 16 Oculus γ | 15 36 | 15 35 $\frac{2}{3}$ | 15 35 $\frac{5}{6}$ |
| Prima Eridani | 5 41 | 5 40 $\frac{1}{2}$ | 5 40 $\frac{3}{4}$ |
| Lucidus pes Orionis | 8 43 $\frac{3}{4}$ | 8 43 $\frac{2}{3}$ | 8 43 42 $\frac{1}{2}$ |
| Sinister humerus Orion. | 5 53 $\frac{1}{2}$ | 5 53 | 5 53 $\frac{1}{4}$ |
| Prima balthej Orion. | 0 40 | 0 39 $\frac{3}{4}$ | 0 39 52 $\frac{1}{2}$ |
| Secunda balthej | 1 31 | 1 30 $\frac{5}{6}$ | 1 30 55 |
| Tertia balthej | 2 13 $\frac{3}{4}$ | 2 13 $\frac{1}{6}$ | 2 13 22 $\frac{1}{2}$ |
| Luc. humerus Orionis | 7 16 | 7 15 | 7 15 $\frac{1}{2}$ |

LIMITATIO DECLINATIONUM PER ARMILLAS
& PER ALTITUDINES.

| | | |
|---------------------------------|---------------------|---------------------|
| <i>Pectus</i> γ | 11 15 $\frac{1}{3}$ | 11 15 $\frac{2}{3}$ |
| <i>Aldeboran</i> | 15 35 $\frac{3}{4}$ | 15 36 $\frac{1}{6}$ |
| <i>Prima Eridani</i> | 5 40 $\frac{2}{3}$ | 5 40 $\frac{1}{2}$ |
| <i>Lucidus pes Orionis</i> | 8 43 $\frac{5}{6}$ | 8 44 |
| <i>Sinister humerus Orionis</i> | 5 53 $\frac{2}{3}$ | 5 54 $\frac{1}{2}$ |
| <i>Prima balthej</i> | 0 39 55 | 0 40 $\frac{1}{6}$ |
| <i>Secunda balthej</i> | 1 30 $\frac{5}{6}$ | 1 31 55 |
| <i>Tertia balthej</i> | 2 13 $\frac{1}{6}$ | |
| <i>Lucidus humerus Orionis</i> | 7 15 $\frac{1}{6}$ | |

OBSERVATIONES ANNI 1587.

OBSERVATIONES SOLIS.

DIE 6 JANUARIJ.

| | | |
|---------------------------------------|---------|--------|
| Alt. ☉ Merid. | | |
| per Q. Tych., | vet. 13 | 8½ |
| | nouo 13 | 8 |
| per Sext. nouum | 13 | 8½ |
| per Q. Volub. | 13 | 6½ Hæc |
| non satis exacta, nam tectum Armilla- | | |
| rum ☉ vmbram non nihil impediuit. | | |
| Declin. ☉ per | 20 | 58½ |
| Armillas subterr. | 20 | 58 |

DIE 8 JANUARIJ.

| | | |
|---------------------------|----------|----------------|
| Alt. ☉ Mer. | | |
| per Q. Volub. | 13 | 29¾ dubia |
| per Tych. | 13 | 31¼ } vmbra |
| | 13 | 31½ } non fuit |
| | | exquifita |
| per Sext. Δ nou. | 13 | 31½ |
| per Regulas min. 12383, | | |
| | refp. 13 | 30 |
| Decl. ☉ per Ar- | 20 | 34¾ |
| millas mai. | 20 | 35¾ |
| Erat mediocriter ferenum. | | |

DIE 11 JANUARIJ¹.

H. 8 M. 6½ ☉ totus ortus videbatur.

Horologium in meridie 4' 7" iusto celerius ibat, isque error illi spatio duorum dierum contigit a Meridie diej noni (sed sol videbatur per rimulas, non enim poterat illucescere) sed in ipso momento index in 12^h 0' 0" collocabatur.

DIE 14 JANUARIJ.

| | | |
|--|----------------|--------|
| <i>Paulo ante meridiem declin. ☉ per</i> | | |
| <i>Armillas maiores subterr.</i> | | |
| | vno pinnacidio | 19 15½ |
| | altero | 19 15¾ |
| Alt. ☉ Merid. per Volub. | 14 | 52½ |
| per Tychonicum | 14 | 50¾ |
| | alt. pinn. | 14 50¾ |
| M. 5 P. M. repetita decl. vno | 19 | 15½ |
| | altero pinn. | 19 15¼ |

H. 12 8' 35" ☉ in Azim. 20 0,

Alt. 14 51

DIE 15 JANUARIJ.

| | | |
|------------------------------|-----------|-------|
| Alt. ☉ in Mer. per Q. Volub. | 15 | 6½ |
| Decl. ☉ per Armill. mai. | 19 | 0¾ |
| | alt. pin. | 19 0¾ |
| Decl. ☉ repetita | vno | 19 0½ |
| | alt. | 19 0¾ |
| Alt. ☉ per | vet. | 15 5 |
| Q. Tych. | nouo | 15 5½ |

Horologium in meridie sequente celerius iusto proceßit M. 1 57" fere duobus minutis, quæ proportionaliter sunt prioribus temporibus adimenda.

H. 2 M. 13 Declin. Solis visa 18 58½
altero 18 57

Pone 18 58½ & confer eam proportionaliter cum meridiana.

H. 2 30½ Decl. Solis apparens

vno pinnac. 18 56

altero 18 56½

2 45 vno pinn. 18 55½

Fuit tunc Alt. Solis 7 45

2 49 Repetita declin.

Solis 18 55½

Postea obseruabatur declin. Solis ob refractionem eius addiscendam, hoc modo

H. 3 35 Declin. ☉ 18 48½ Alt. ☉ 2 45

3 38 Eadem declin. 18 47½ 2 30

DIE 16 JANUARIJ.

Paulo ante Merid. Declin. ☉

vno 18 46

altero 18 46½

Alt. ☉ Merid. per Volub. 15 21½

per Q. Tychon. vet. 15 20

nou. 15 19¾

N. B. Horologium in hoc meridie a præcedente saltem 35" iusto celerius mouebatur per horas 24. Vnde tempora prius assignata a meridie antecedente satis bene se habent.

¹ Declinationes Solis die 9 observatas infra inter observationes Veneris invenies.

Repetita paulo vno 18 46
P. M. decl. ☉
*per Armillas*¹ alt. 18 46 $\frac{1}{3}$

DIE 21 JANUARIJ.

☉ *in Meridie* Alt. *per Volub.* 16 40 $\frac{1}{2}$
per Tychon. 16 40
per Q. Max. 16 39 $\frac{1}{2}$
Per Regulas 11943, resp. 16 40
Declin. per vno 17 26
Arm. maiores alt. 17 25 $\frac{1}{2}$
Non fuit satis serenum, sed rariu-
sculæ nubes Soli interponebantur.

DIE 24 JANUARIJ.

Altitudo ☉ Meridiana per Q. Volub.
rectificatum cum rotundo pinnacido
 17 30 $\frac{2}{3}$
per Q. Tychon. vno pin. 17 30 55
per Sext. nouum 17 30 45
per Q. Max. 17 31
per Regulas min. 11827,
 resp. 17 30
Declin. ☉ in meridie vno 16 35
per Armill. altero 16 34 $\frac{5}{6}$

DIE 26 JANUARIJ.

10^H 16^M A. M. Decl. ☉ vno 16 0
per Armill. alt. 16 0 $\frac{1}{4}$
Horologium in Meridie 10' 50' iusto
tardius ibat, qui error illi duorum di-
erum spatio contigit.
 Alt. ☉ Merid. *per Q. Volub.* 18 7
per Q. Tychon. vet pinn. 18 6 $\frac{1}{2}$
 Declin. *per* vno pinn. 15 59 $\frac{1}{2}$
*Arm. Mer.*¹ altero 15 59 $\frac{2}{3}$

Horologium in Meridie proxime se-
quente 0^M 15'' scrupulis secundis citius
saltem ibat, obseruato transitu ☉^{is} per
merid. per pinnacidia Quadrantis vo-
lubilis medium corpus solare aspici-
endo.

DIE 28 JANUARIJ.

Alt. *Solis Merid. per Volub.* 18 43 20
per Muralem, vno 18 43 10
 altero 18 43 15
Pone itaque 18 43 15 exactissime.

12^H 2^M Decl. ☉ vno pinn. 15 22 $\frac{3}{4}$
per Armill. altero 15 22 $\frac{1}{2}$

DIE 30 JANUARIJ.

H. 11 M. 40 Declin. ☉
 vno pinn. 14 45 $\frac{1}{6}$
 11 41 altero 14 45 $\frac{1}{4}$

Nota. Horologium in Meridie se-
quente vno minuto & 5 secundis iusto
tardius mouebatur.

Alt. ☉ *per Volub.* 19 21 20
per Tychon. vno 19 21 $\frac{1}{6}$
per Sext. nou. 19 21 $\frac{5}{6}$
 Declin. ☉ vno pinnac. 14 45
 alt. pinnac. 14 45

DIE 6 FEBRUARIJ.

Alt. ☉ Merid. *per Volub.* 21 40 $\frac{1}{2}$
per Tychon. 21 39 $\frac{3}{4}$
 Declin. *per Armill. subt.* 12 24 $\frac{1}{4}$
 alt. 12 24 $\frac{3}{8}$

N. B. Non fuit satis serenum.

DIE 17 FEBRUARIJ.

Alt. ☉ merid. nouo 25 38 $\frac{1}{2}$
per Tych. vet. 25 39 $\frac{1}{4}$
per Q. Volub. 25 39 $\frac{1}{4}$

DIE 18 FEBRUARIJ.

Alt. ☉ merid. *per Volub.* 26 1 $\frac{1}{2}$
per Tychon. vet. 26 1 $\frac{1}{6}$
 nouo 26 2

Horologium in meridie præcedente
 2^{bus} minutis celerius iusto moueba-
 tur.

DIE 21 FEBRUARIJ.

Alt. ☉ merid.
per Q. Tich. nouo 27 10
per Q. Volub. 27 10
per Q. Max. 27 9 $\frac{1}{4}$
per Regulas 10424 resp. 27 10
 Declin. *per Armillas* 6 55 $\frac{5}{6}$
 alt. 6 55 $\frac{3}{4}$

DIE 22 FEBRUARIJ.

Horologij error in Meridie fuit in-
sensibilis. Nam 20 scrupulis secundis
saltem iusto tardius ibat.

¹ Observationes declinationis Solis prope occasum infra inter observationes Veneris inuenies.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Mer. per Q. Volub. | 27 33 |
| per Q. Tychon. | vet. 27 33 $\frac{1}{2}$ |
| | nouo 27 33 $\frac{1}{2}$ |
| Declin. ☉ per Arm. Au. | 6 32 $\frac{1}{2}$ |
| | 6 32 $\frac{1}{2}$ |

DIE 24 FEBRUARIJ.

Horologium in Meridie tardius iusto ibat 9 $\frac{1}{2}$ Minutis, qui error a duobus diebus, vtpote a Meridie diej 22 illi obrepfit.

| | |
|------------------------------|--------------------------|
| In Meridie Alt. ☉ per Volub. | 28 19 $\frac{1}{2}$ |
| per Tychon. | vet. 28 19 $\frac{1}{2}$ |
| | nouo 28 19 $\frac{1}{2}$ |

| | |
|-----------------|------------------------------|
| Declin. per Ar- | vno pin. 5 46 $\frac{1}{2}$ |
| mill. minores | alt. pin. 5 46 $\frac{1}{2}$ |

DIE 25 FEBRUARIJ.

| | |
|-----------------------------|--------------------------|
| Alt. ☉ Merid. per Q. Volub. | 28 42 $\frac{1}{2}$ |
| per Tychon. | nouo 28 42 $\frac{1}{2}$ |
| | vet. 28 43 |

| | |
|-----------------------|--------------------|
| Declin. ☉ per Armill. | 5 23 $\frac{1}{2}$ |
|-----------------------|--------------------|

Horologium in Meridie 8 $\frac{1}{2}$ Minutis tardius iusto mouebatur, qui error a Meridie proximo accrevit.

DIE 26 FEBRUARIJ.

Mane. H. 6 M. 37 $\frac{1}{2}$ ☉ ortus videbatur.

Horologium in Meridie 15 $\frac{1}{2}$ Minutis iusto citius ibat, a Meridie proximo iste error ei competit.

| | |
|---------------------------|-------------------------|
| Alt. ☉ Mer. per Q. Volub. | 29 5 $\frac{3}{4}$ |
| per Q. Tychon. | nouo 29 5 $\frac{3}{4}$ |
| | vet. 29 6 |

| | |
|---------------------------|-------------------------|
| per Reg. min. 10132 resp. | 29 7 |
| Decl. ☉ per Armill. M. | vno 4 59 $\frac{1}{4}$ |
| | alt. 4 59 $\frac{1}{6}$ |

DIE 28 FEBRUARIJ.

| | |
|-----------------------------|--------------------------|
| Alt. ☉ Merid. per Q. Volub. | 29 52 $\frac{1}{2}$ |
| | vet. 29 52 $\frac{1}{2}$ |

| | |
|----------------|---------------|
| per Q. Tychon. | nou. 29 52 35 |
| | vet. 29 53 |

| | |
|-------------|---------------------|
| per Q. Max. | 29 53 $\frac{1}{2}$ |
|-------------|---------------------|

| | |
|-----------------|-------------------------|
| Declin. per Ar- | vno 4 13 $\frac{1}{3}$ |
| mill. subterr. | alt. 4 13 $\frac{1}{2}$ |

DIE 3 MARTIJ.

| | |
|----------------------|--|
| Sol incepit oriri | 6 ^H 11 $\frac{1}{4}$ ^M |
| Sol medius oriebatur | 6 14 $\frac{1}{2}$ |
| Sol totus ortus | 6 16 $\frac{5}{6}$ |

Sequentia in Sole pro refractione eius indaganda.

Nota. Hæc Azimuta omnia numerantur a septentrione per occasum versus Meridiem, vel a Meridie versus ortum.

| Tempus | Declin. ☉ Merid. | Alt. ☉ | Azim. ☉ |
|--------------------------------|--------------------|--------------------|---------|
| 6 ^H 18 ^M | 2 39 $\frac{1}{2}$ | 0 15 | |
| 6 20 | 2 42 | 0 40 | |
| 6 22 20 vno pin. | 2 46 | 0 48 | 83 30 |
| 6 25 15 | 2 48 $\frac{1}{2}$ | 1 14 | 82 51 |
| 6 27 35 | 2 50 | 1 30 $\frac{1}{2}$ | 82 23 |
| 6 30 0 | 2 52 $\frac{1}{4}$ | 1 49 | 81 56 |

Ex his sequentibus potest colligi refractionis ☉ iuxta Horizontem, quando non longe abest ab Æquinoctio.

| | | | |
|----------------------|--------------------|--------------------|---------------------|
| 6 47 45 | 2 59 | 4 3 | 78 15 |
| 6 49 3 vno pin. | 2 59 $\frac{1}{2}$ | 4 17 | 77 59 |
| 6 50 12 vno pin. | 2 59 $\frac{3}{8}$ | 4 27 | 77 44 |
| 6 51 10 vno pin. | 2 59 $\frac{3}{4}$ | 4 36 | 77 31 $\frac{1}{2}$ |
| 6 52 30 vno pin. | 2 59 $\frac{3}{4}$ | 4 45 | 77 17 |
| 6 54 35 vno pin. | 3 0 | 5 2 | 76 49 |
| 6 58 20 vno pin. | 3 0 $\frac{1}{2}$ | 5 31 $\frac{1}{2}$ | 76 2 |
| 6 59 26 vno pin. | 3 0 $\frac{2}{5}$ | 5 39 | 75 51 |
| 7 2 20 alt. pin.* 3 | 0 $\frac{1}{6}$ | | |
| 7 3 45 eodem* 3 | 0 $\frac{1}{6}$ | | |
| 7 5 42 vno pin. | 3 1 | 6 29 $\frac{2}{3}$ | 74 30 |
| 7 7 18 vno pin. | 3 1 $\frac{1}{2}$ | 6 42 | 74 10 $\frac{1}{2}$ |
| 7 8 26 vno pin. | 3 1 $\frac{1}{2}$ | 6 50 $\frac{1}{2}$ | 73 57 |
| 7 9 27 vno pin. | 3 1 $\frac{3}{4}$ | 7 0 | 73 47 |
| 7 11 20 alt. pin.* 3 | 1 $\frac{1}{4}$ | | |
| 7 12 50 eod. alt.* 3 | 1 $\frac{3}{4}$ | | |
| 7 14 0 eod. alt.* 3 | 1 $\frac{3}{4}$ | | |

Nota. Hæc posteriores fuerunt minus claræ, sed tamen sunt mediocres.

| | | | |
|----------------------|-----------------|------|-------|
| 7 15 35 vno | | | |
| rurfus 3 | 2 $\frac{1}{2}$ | 7 46 | 72 28 |
| 7 16 40 vno | | | |
| rurfus 3 | 2 $\frac{1}{2}$ | 7 54 | 72 17 |
| 7 17 20 vno | | | |
| rurfus 3 | 3 | 8 0 | 72 7 |
| 7 19 30 alt. pin.* 3 | 2 $\frac{1}{4}$ | | |
| 7 20 0 alt. pin.* 3 | 2 $\frac{1}{2}$ | | |
| 7 20 30 alt. pin.* 3 | 2 $\frac{1}{2}$ | 8 32 | |
| 7 21 0 | | | |

Nota. Vbi obelisci tales obseruatur declinatio Solis altero pinna-cidio, invertendo Armillam, ita vt Auricalcum diuisum inferius verte-*

retur, in cæteris erat illud superius, et sunt bonæ obseruationes, correcto axe instrumenti. Horologium in Meridie sequente saltem 3½ M. iusto celerius mouebatur, isque error illi abhinc tribus diebus irrepsit, videlicet a die 28 Februarij.

Alt. Solis mer. per Q. Volub. 31 3½

vel cum

per Q. Tychon. 31 3½

Pone alt. ☉ veram 31 3½

Declin. per Armill. Maior

vno 3 3

altero 3 2½

Deinde ante occasum Solis obseruabatur ☉ pro cognoscenda refractione eius in hunc qui sequitur modum. Numerantur autem hæc Azimuta a Meridie versus occasum.

| Tempus H M S | | Decl. ☉ auf. | Azim. | Alt. ☉ |
|-----------------|--------------|-----------------|-------|--------|
| 4 31½ | vno pin. | 2 55½ | 69 13 | 10 13½ |
| 4 41 55 | vno pin. | 2 55 | 71 27 | 8 52½ |
| 4 45 30 | vno pin. | 2 54¾ | 72 12 | 8 24¾ |
| 4 49 0 | alt. pin.* | 2 55 | | |
| 4 51½ | priori pin.2 | 54½ | 73 28 | 7 37¼ |
| 4 56 0 | priori pin.2 | 54 | 74 13 | 7 2¾ |
| 4 59½ | | 2 53½ | 75 12 | 6 33 |
| 5 7½ | | 2 52¼ | 76 50 | 5 30½ |

Statim post

| | | | | |
|---------|----------------------------|-------|-------|-------|
| | alt. pin.* | 2 52½ | | |
| 5 13½ | priori pin.2 | 51½ | 77 57 | 4 47 |
| 5 16 | prior. pin.2 | 50¾ | 78 32 | 4 26 |
| 5 20½ | prior. pin.2 | 49¾ | 79 33 | 3 48 |
| 5 22¾ | prior. pin.2 | 48¾ | 79 57 | 3 31¾ |
| 5 27 | priori | 2 47 | 80 50 | 2 59 |
| 5 28½ | priori | 2 46½ | 81 12 | 2 45 |
| 5 30¾ | priori | 2 45¼ | 81 37 | 2 30 |
| 5 32¾ | priori | 2 44¼ | 82 2 | 2 15 |
| 5 34½ | priori | 2 43½ | 82 26 | 2 0 |
| 5 40¾ | priori | 2 39 | 83 45 | 1 15 |
| 5 42 37 | priori | 2 37 | 84 5 | 1 0 |
| 5 44 42 | | 2 34½ | 84 32 | 0 45 |
| 5 46 47 | | 2 33 | 84 57 | 0 30 |
| 5 48 34 | | 2 32 | 85 20 | 0 20 |
| 5 49 20 | | 2 30½ | 85 31 | 0 15 |
| 5 50 25 | | | 85 44 | 0 10 |
| 5 49 0 | Occidere ☉ limbus incepit. | | | |
| 5 51 25 | Medium ☉ occidere incepit. | | | |
| 5 53 15 | Totus limbus ☉ occidit. | | | |

DIE 4 MARTIJ.

Alt. ☉ Merid.

per Q. Volub. 31 26½

per Q. Tychon. nouo 31 26½

veteri 31 27

per Q. Max. 31 26½

Decl. per Armillas vno 2 38½

alt. 2 38½

Horologium in Meridie 14½ M. iusto celerius mouebatur, idque a meridie præcedente nescio quo errore.

DIE 9 MARTIJ.

Erat mediocriter serenum, sed ventus Boreus validissime toto die flabat.

Horologium in Meridie 12 Minutis iusto tardius ibat, sed aliquot diebus non fuit verificatum.

Alt. ☉ Merid.

per Q. Volub. 33 25½

per Q. Tychon. vet. 33 25

nouo 33 24½

Declin. ☉ per Armillas 0 40½

0 40½

DIE 10 MARTIJ.

Erat bene serenum & tranquillum.

Alt. ☉ Merid.

per Q. Tychon. nouo 33 48 50

veteri 33 48 55

per Q. Volub. 33 48½ vel 33

per Sext. nouum 33 48 20

per Q. Max. 33 48½

per Regulas mino-

ris 9423½ resp. 33 47

H. 11 59' Decl. ☉ per vno 0 16¾

12 1 Arm. fubter. alt. 0 17

12 2 Fuit alt.

per Volub. 33 48½

12 3 Repetita decl. vno 0 17

altero 0 16½

Azim. ☉ Alt. per Q.
occ. Volub.

12 6 40 1 59 33 48

12 8 10 2 24½ 33 47½

12 9 25 2 48 33 47

12 10 20 3 6½ 33 46½

12 12 Repetita { vno 0 17

Declin. ☉ { alt. 0 17

| | | | | | | | |
|---|------------------|----------|---|------------------|------|----|----|
| 3 | 7 $\frac{1}{2}$ | Decl. M. | 0 | 13 $\frac{1}{3}$ | Alt. | 22 | 20 |
| 3 | 9 | | 0 | 13 $\frac{1}{6}$ | | 22 | 15 |
| 3 | 26 $\frac{1}{2}$ | | 0 | 12 | | 20 | 20 |
| 3 | 45 | | 0 | 11 $\frac{1}{2}$ | | 18 | 0 |

Postea ☉ obseruabatur ob refractionem eius indagandam.

| Tempus | Declin. ☉ priori pin. | Auf. alt. pin. | Azim. ☉ occ. | Alt. ☉ |
|---------|--------------------------|--------------------|-----------------|---------------------|
| 4 10 10 | 0 | 10 $\frac{3}{4}$ | 66 39 | 14 53 $\frac{1}{2}$ |
| 4 13 28 | 0 | 10 $\frac{1}{2}$ | 67 40 | 14 29 |
| 4 15 50 | 0 | 10 $\frac{1}{3}$ | 68 10 | 14 10 $\frac{1}{4}$ |
| 4 17 29 | | 0 10 $\frac{3}{4}$ | 68 49 | 13 56 |
| 4 20 5 | 0 | 10 $\frac{1}{4}$ | 69 10 | 13 36 |
| 4 26 0 | 0 | 10 | 70 6 | 12 51 |
| 4 28 15 | 0 | 10 | 70 39 | 12 31 |
| 4 36 10 | 0 | 9 $\frac{3}{4}$ | 72 20 | 11 29 $\frac{1}{2}$ |
| 4 38 0 | 0 | 9 $\frac{3}{4}$ | 72 41 | 11 14 |
| 4 39 30 | | 0 10 | 73 5 | 11 0 |
| 4 41 20 | | 0 10 | 73 28 | 10 47 |
| 4 42 50 | 0 | 9 $\frac{1}{2}$ | 73 48 | 10 35 |
| 4 44 3 | 0 | 9 $\frac{1}{3}$ | 74 1 | 10 26 |
| 4 55 0 | 0 | 8 $\frac{1}{2}$ | 76 24 | 8 56 |
| 4 56 45 | | 0 9 | 76 45 | 8 44 |
| 4 58 0 | 0 | 8 $\frac{1}{2}$ | 77 1 | 8 33 $\frac{1}{2}$ |
| 4 59 0 | 0 | 8 $\frac{1}{3}$ | 77 20 | 8 24 $\frac{1}{2}$ |
| 5 0 30 | 0 | 8 | 77 30 | 8 14 |
| 5 1 55 | | 0 8 $\frac{1}{3}$ | 77 51 | 8 1 |
| 5 4 30 | 0 | 7 $\frac{2}{3}$ | 78 22 | 7 41 |
| 5 5 40 | 0 | 7 $\frac{1}{2}$ | 78 37 | 7 32 |
| 5 11 0 | 0 | 7 | 79 49 | 6 47 $\frac{1}{2}$ |
| 5 12 30 | 0 | 6 $\frac{1}{2}$ | 80 5 | 6 36 |
| 5 13 50 | | 0 6 $\frac{2}{3}$ | 80 21 | 6 25 |
| 5 14 55 | | 0 6 $\frac{2}{3}$ | 80 36 | 6 17 |
| 5 21 55 | 0 | 5 | 82 4 | 5 19 |
| 5 23 54 | 0 | 4 $\frac{1}{2}$ | 82 30 | 5 3 |
| 5 25 21 | 0 | 4 | 82 47 | 4 52 |
| 5 26 30 | | 0 4 $\frac{1}{2}$ | 83 1 | 4 42 |
| 5 27 40 | 0 | 3 $\frac{1}{2}$ | 83 15 | 4 32 |
| 5 28 36 | 0 | 3 $\frac{1}{4}$ | 83 28 | 4 26 $\frac{1}{2}$ |
| 5 32 42 | 0 | 2 $\frac{1}{2}$ | 84 20 | 3 50 $\frac{1}{2}$ |
| 5 34 0 | 0 | 2 | 84 36 | 3 40 $\frac{1}{4}$ |
| 5 34 55 | 0 | 1 $\frac{1}{2}$ | 84 46 | 3 33 |
| 5 35 55 | 0 | 1 $\frac{1}{2}$ | 85 0 | 3 25 |
| 5 36 54 | 0 | 1 | 85 16 | 3 17 |
| 5 38 1 | 0 | 0 $\frac{1}{2}$ | 85 27 | 3 8 |
| 5 38 51 | 0 | 0 $\frac{1}{3}$ | 85 40 | 3 0 |
| 5 39 35 | 0 | 0 | 85 48 | 2 54 |
| Borea | | | | |
| 5 40 40 | 0 | 0 $\frac{1}{2}$ | 86 4 | 2 47 |
| 5 41 46 | 0 | 1 | 86 17 | 2 37 |

| | | | | |
|--------------|----------------|-----------------|-------|--------------------|
| 5 42 50 | 0 | 1 $\frac{1}{2}$ | 86 28 | 2 29 |
| 5 46 6 | 0 | 2 | 87 8 | 2 6 $\frac{1}{4}$ |
| 5 47 10 | 0 | 3 | 87 20 | 1 56 |
| 5 48 0 | 0 | 3 $\frac{1}{2}$ | 87 43 | 1 49 |
| 5 48 59 | 0 | 4 | 87 48 | 1 43 |
| 5 55 40 | | | 89 10 | 0 57 |
| 5 57 30 | | | 89 20 | 0 36 $\frac{1}{2}$ |
| 5 59 | | | 89 51 | 0 27 |
| super. limb. | | | | |
| 6 1 20 | medius occidit | | | 0 19 |
| 6 2 0 | | | 90 22 | |

DIE 11 MARTIJ.

Matutina declinato Solis.

| H. M. | Decl. borealis | Alt. ☉ |
|-------|-------------------|--------|
| 6 18 | 0 11 | 3 19 |
| 6 20 | 0 10 | 3 40 |
| 6 22 | 0 10 | 3 48 |
| 6 25 | 0 9 $\frac{1}{4}$ | 4 16 |
| 6 26 | 0 8 $\frac{1}{2}$ | 4 26 |

Limitatio antecedentium

| | | |
|------|--------------------|------|
| 6 18 | 0 11 | 3 20 |
| 6 20 | 0 10 $\frac{1}{4}$ | 3 40 |
| 6 22 | 0 9 $\frac{3}{4}$ | 3 48 |
| 6 24 | 0 9 $\frac{1}{4}$ | 4 16 |
| 6 26 | 0 8 $\frac{1}{2}$ | 4 26 |

Hæ declinationes in certa altitudine possunt conferri cum ijs, quas die præcedente Sole ad occasum tendente accepimus, vt refractionum circa æquinoctia ratio percipiatur, sed rariulculæ nubes interfuerant, est tamen mediocris consideratio.

Die 11 ad Meridiem correctum est Horologium, mouebaturque tardius iusto 3 $\frac{1}{2}$ M., qui error ei a Meridie præcedentis diej irrepsit.

N. B. Ex antecedentibus colligitur, siquidem motus diurnus declinationis sit 23' 40" & quia in Meridie præcedente hæc declinatio visa 0 17 Merid., quod hora 6 $\frac{1}{2}$ Matutina, elapsis a meridie horis 18 $\frac{1}{2}$, deberet declinatio vera esse 1 M. præcise Borea, nam 18 scrupulis mutata est a meridie præcedente, visa est autem per obseruationem declinatio 0 G. 11 M. Borea, ergo refractione ingerebat 10 Mi-

nuta deuiationis in altitudine ☉ visa 3½, heri autem vesperi in altitudine eadem visa est declinatio 1½ merid., cum deberet esse 11½, vt & hic refractione 10½ euadat, pene cum priori consentiens, vt ob id dubium non sit iuxta æquinoctium in altitudine 3½ esse Solis refractionem 10 proxime scrupulorum, quoad declinationem, qualis etiam in solstitio reperitur æstiuo, sed huius potes alias penitiorem facere inquisitionem.

DIE 12 MARTIJ.

Erat apprime serenum flante aliquantulum vento septent.

*H. 11 M. 45 Decl. Bor. ☉ vno pin. 0 30½
per Armillas altero 0 30½*

Obseruatio per Volubilem

| | Azim. | Altitudo |
|-----------------|-------|----------|
| Antemeridianum | 2 0 | 34 35 10 |
| | 1 30 | 34 35 15 |
| | 1 0 | 34 35 30 |
| | 0 30 | 34 36 0 |
| In ipso Meridie | 0 0 | 34 36 0 |
| Pomerid. | 0 30 | 34 36 0 |
| | 1 0 | 34 35 40 |
| | 1 30 | 34 35 20 |
| | 2 0 | 34 35 10 |

Horologium in hoc Meridie 3 Min. iustocelerius mouebatur, idque a Meridie diej antecedentis.

*12^h 8' Declin. per vno pin. 0 30 45
Armillas altero 0 30 30*

*12 10 Declin. re- vno pin. 0 30 30
petita altero 0 30 50*

Fuit itaque hora 12 M. 10

vera declinatio 0 30 40

Declin. ex altit. Merid. 0 30 40

Alt. merid. per Q. Tychon.

| | |
|-----------------|------------------|
| | nouo 34 36½ |
| | vet. pin. 34 36½ |
| per Sext. nouum | 34 36 |
| per Q. Max. | 34 35½ |
| per Q. volub. | 34 36 |

DIE 17 MARTIJ.

Alt. ☉ Merid. per Q. Tych.

| | |
|------|--------|
| vet. | 36 34 |
| nouo | 36 33¾ |

| | |
|------------------------------|-------------------------|
| per Q. Volub. | 36 33½ |
| per Sext. nouum | 36 34 |
| Declin. per Armill. subterr. | vno 2 27½ alt. 2 27¾ |

DIE 18 MARTIJ.

| | |
|--------------------------|------------------------------|
| Alt. ☉ Mer. per Q. Tych. | 36 57 |
| per Q. Volub. | 36 57¼ |
| per Sext. nouum | 36 57½ |
| Declin. per Armill. | vno 2 51 alt. pinn. 2 51½ |

Non erat satis serenum.

DIE 22 MARTIJ.

| | |
|----------------------------|------------------|
| Alt. ☉ Merid. | |
| per Sext. nouum | 38 31 |
| per Regul. min. 8689 resp. | 38 30 |
| per Q. Volub. | 38 30½ |
| Declin. ☉ per Armill. | 4 24½ B. 4 23 |

N. B. Nonnifi parua serenitas fuit.

DIE 24 MARTIJ.

| | |
|----------------------|----------------------------|
| Alt. ☉ Merid. | |
| per Q. Tych. | nouo 38 52½ vet. 38 53½ |
| per Sext. nou. | 38 53½ |
| per Q. Max. | 38 53½ |
| per Q. volub. | 38 53½ |
| Decl. per Armill. B. | vno 4 46½ alt. 4 46¾ |

DIE 25 MARTIJ.

| | |
|------------------------------|-----------------------------|
| Alt. ☉ Mer. | |
| per Q. Tych. | veteri 39 39¼ nouo 39 39 |
| per Q. volub. | 39 39¼ |
| per Q. Max. | 39 38¾ |
| Declin. per Armill. subterr. | 5 32½ 5 32¾ |

Non fuit satis serenum.

DIE 30 MARTIJ.

| | |
|------------------------------|---------------------------|
| Alt. ☉ Mer. | |
| per Q. Tych. | nouo 41 32 vet. 41 32½ |
| per Q. Max. | 41 32½ |
| per Q. volub. | 41 31½ |
| Declin. per Armill. subt. B. | 7 25¾ 7 25½ |

Non erat satis serenum.

DIE 1 APRILIS.

N. B. Vbiq̄ue potius pinnacidio nouo est adhibenda fides in maiori quadrate, eo quod illud eſt firmitus & vetus iam nimis debilitatum.

| | |
|------------------------|--|
| Alt. ☉ Merid. | |
| per Q. Tych. | nouo 42 16 $\frac{2}{3}$ vet. 42 16 $\frac{5}{6}$ |
| per Q. volub. | 42 16 35 |
| per Q. max. | 42 16 $\frac{1}{3}$ |
| Declin. per Armill. B. | vno 8 10 alt. 8 10 $\frac{1}{3}$ |

Erat bene serenum. Hic non satis conuenit declinatio cum altitudine.

DIE 2 APRILIS, MANE.

| | |
|--|-------------------------|
| 4 ^H 59' Oriebatur superior limbus ☉ | |
| 5 1 $\frac{5}{6}$ Oriebatur medium ☉ | |
| 5 3 $\frac{2}{3}$ Totus ortus videbatur | |
| | Altit. ☉ Decl. ☉ Sept. |
| 5 10 $\frac{1}{2}$ | 1 15 8 47 |
| 5 11 $\frac{5}{8}$ | 1 25 8 45 $\frac{1}{2}$ |

DIE 5 APRILIS.

| | |
|---|----------------|
| 4 ^H 50 $\frac{1}{2}$ ^M Superior limbus ☉ supra horizontem eleuabatur. | |
| 4 53 ☉ medius ortus | |
| 4 54 $\frac{2}{3}$ ☉ totus ortus | |
| 5 24 Decl. ☉ 9 42 | Alt. ☉ 4 5 |
| 5 26 50 | 9 41 4 19 fuit |

tunc ☉ a Meridiano ad ortum 96° 17'.
Pro Horologio.

Horologium in Meridie proxime ſequenti M. 5 $\frac{1}{2}$ tardius iuſto ibat. Is error aliquot diebus competit.

| | |
|---|--|
| Alt. ☉ Merid. per Tych. | nouo 43 43 $\frac{1}{2}$ vet. 43 43 $\frac{3}{4}$ |
| per Q. Volub. | 43 44 $\frac{2}{3}$ |
| per Q. Max. | 43 43 $\frac{3}{4}$ |
| Decl. per Arm. ſubterr. | vno 9 37 $\frac{3}{4}$ alt. 9 37 $\frac{1}{2}$ |
| 6 ^H 57'30" Inferior limbus ☉ occidere videbatur. | |
| 6 59 10 Medium ☉ ^{is} occidebat. | |
| 7 1 40 Totus ☉ occidit. | |

DIE 7 APRILIS.

Horologium in Meridie 5 Min. iuſto citius ibat ſpacio 24 horarum.

| | |
|------------------------|--|
| Alt. ☉ Merid. | |
| per Tych. | 44 26 $\frac{2}{3}$ 44 26 $\frac{5}{6}$ |
| per Q. Volub. | 44 26 $\frac{5}{8}$ |
| per Q. Max. | 44 25 $\frac{1}{3}$ |
| Declin. per Armill. B. | vno 10 20 $\frac{1}{3}$ alt. 10 20 |

DIE 15 APRILIS.

| | |
|---------------------------------|---|
| Alt. ☉ Mer. | |
| per Q. Tych. | nouo 47 9 $\frac{2}{3}$ vet. 47 9 55 |
| per Q. volub. | 47 9 $\frac{5}{6}$ |
| Declin. ☉ per Armillas ſubterr. | 13 3 B. 13 2 $\frac{1}{2}$ |

DIE 18 APRILIS.

| | |
|----------------------------|--|
| Alt. ☉ Merid. | |
| per Q. Tych. | 48 7 $\frac{1}{6}$ 48 7 $\frac{1}{2}$ |
| per Q. Volub. | 48 7 |
| Decl. per Armill., vtroque | 14 1 |

DIE 22 APRILIS.

| | |
|---------------------|--------------------------------|
| Alt. ☉ Merid. | |
| per Q. Tych. | nouo pinn. 49 21 $\frac{1}{8}$ |
| per Q. Volub. | 49 21 $\frac{1}{4}$ |
| Declin. per Armill. | 15 15 |

DIE 23 APRILIS.

| | |
|---------------|---------------------|
| Alt. ☉ Merid. | |
| per Mural. | 49 39 $\frac{1}{2}$ |

DIE 29 APRILIS.

| | |
|---------------|---|
| Alt. ☉ Merid. | |
| per Q. Tych. | 51 20 $\frac{5}{6}$ |
| per Q. Volub. | 51 20 $\frac{1}{2}$ |
| Decl. ☉ Bor. | vno pin. 17 15 alt. pin. 17 14 $\frac{3}{4}$ |

DIE 3 MAIJ.

| | |
|--|---|
| Alt. ☉ Merid. | |
| per Q. Volub. | 52 23 15 |
| per Q. Tych. | 52 23 10 |
| H. 11 55' Decl. ☉ per Armill. ſubterr. | { vno 18 16 $\frac{1}{2}$ alt. 18 16 $\frac{3}{4}$ |

DIE 5 MAIJ.

| | |
|---------------|---------------------|
| Alt. ☉ Merid. | |
| per Q. Tych. | 52 52 $\frac{1}{8}$ |
| per Q. Volub. | 52 52 $\frac{3}{8}$ |

Declin. per Armill. B. vno 18 $46\frac{1}{2}$
 altero 18 $46\frac{2}{3}$

DIE 7 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 53 $20\frac{1}{3}$
 per Q. Volub. 53 $20\frac{1}{4}$
 Declin. per Armill. B. vno 19 $14\frac{1}{2}$
 alt. 19 $14\frac{1}{4}$

DIE 8 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 53 34
 per Q. Volub. 53 $33\frac{3}{4}$
 Declin. per Armill. 19 $27\frac{1}{2}$ B.
 alt. 19 $27\frac{2}{3}$

DIE 9 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 53 $47\frac{1}{3}$
 per Q. Volub. 53 $47\frac{1}{2}$
 Declin. per Armillas { vno pin. 19 $41\frac{1}{4}$
 alt. pin. 19 $41\frac{1}{6}$

DIE 19 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 55 $40\frac{1}{6}$
 per Q. Volub. 55 $40\frac{1}{6}$
 Declin. per Armill. vno 21 $34\frac{1}{3}$
 alt. 21 34

DIE 20 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 55 $49\frac{1}{4}$
 per Q. minim. Horizont. 55 $48\frac{1}{2}$

DIE 21 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 55 $58\frac{2}{3}$
 per Q. minimum 55 $58\frac{1}{4}$

DIE 22 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 56 $7\frac{1}{3}$
 per Q. Volub. 56 $7\frac{2}{3}$
 per Q. minimum 56 8
 Declin. per Armillas subterr.
 maiores vtroque 22 1

DIE 23 MAIJ.

Alt. ☉ Merid. { nouo 56 $15\frac{1}{6}$
 per Q. Tych. { vet. 56 $15\frac{1}{2}$

per Q. Volub. 56 $15\frac{1}{3}$
 per Q. Minim. 56 $14\frac{1}{2}$

DIE 24 MAIJ.

Alt. ☉ Merid. { nouo 56 23
 per Q. Tych. { vet. 56 $23\frac{1}{6}$
 per Q. Volub. 56 23

DIE 31 MAIJ.

Alt. ☉ Merid.
 per Q. Tych. 57 7
 per Q. Volub. 57 $6\frac{1}{2}$

DIE 6 JUNIJ.

Alt. ☉ Merid. { nouo 57 $28\frac{3}{4}$
 per Q. Tych. { vet. 57 29
 per Q. Volub. 57 $28\frac{3}{4}$

DIE 7 JUNIJ.

Alt. ☉ Merid. { nouo 57 $30\frac{5}{8}$
 per Q. Tych. { vet. 57 31
 per Q. Volub. 57 $30\frac{1}{2}$
 Declin. per Armill. vno 23 25
 alt. 23 $24\frac{5}{8}$

DIE 8 JUNIJ.

Alt. ☉ Merid.
 per Q. Tych. 57 $32\frac{1}{2}$
 per Q. Volub. 57 $32\frac{1}{4}$
 Declin. per Armillas 23 $26\frac{3}{4}$
 alt. 23 $26\frac{5}{8}$

Erat mediocriter serenum.

DIE 14 JUNIJ.

Alt. ☉ Merid. { nouo pin. 57 $34\frac{1}{2}$
 per Q. Tych. { vet. pin. 57 $34\frac{2}{3}$
 per Q. Volub. 57 $34\frac{1}{2}$
 Declin. per Armillas subterr. { vno 23 29
 alt. 23 $28\frac{2}{3}$

DIE 16 JUNIJ.

Alt. ☉ Merid. { nouo 57 32
 per Q. Tych. { vet. 57 $32\frac{1}{2}$

DIE 20 JUNIJ.

Alt. ☉ Merid.
 per Q. Tych. 57 $21\frac{5}{6}$
 per Q. Volub. 57 $22\frac{1}{4}$
 Declin. per Armill., vno 23 16
 alt. 23 $15\frac{5}{6}$

Eodem die p.m. obseruabatur ☉ propter refractionem eius indagandam.

| H. M. | Altitudo ☉ | | Declinatio ☉ | |
|--------------------|------------|---------------------|-----------------------|--|
| | G. M. | G. M. | G. M. | |
| 5 32 $\frac{1}{2}$ | 22 55 | 23 14 | vtroque | |
| 5 38 $\frac{1}{4}$ | 22 5 | 23 14 | | |
| 5 53 $\frac{1}{8}$ | 20 0 | 23 14 $\frac{1}{8}$ | alt. 14 $\frac{1}{2}$ | |
| 5 59 | 19 15 | 23 14 $\frac{1}{4}$ | | |
| 6 6 $\frac{1}{6}$ | 18 20 | 23 14 $\frac{1}{2}$ | | |
| 6 16 $\frac{3}{4}$ | 16 50 | 23 15 | | |
| 6 19 $\frac{1}{2}$ | 16 30 | 23 15 $\frac{1}{4}$ | | |
| 7 10 | 10 0 | 23 16 $\frac{1}{2}$ | | |
| 7 17 | 9 5 | 23 17 | | |
| 7 23 $\frac{1}{6}$ | 8 20 | 23 17 $\frac{1}{2}$ | | |
| 7 31 $\frac{5}{6}$ | 7 20 | 23 18 $\frac{3}{4}$ | | |
| 7 34 $\frac{2}{3}$ | 7 0 | 23 19 | | |
| 7 43 | 6 0 | 23 19 $\frac{3}{4}$ | | |
| 7 52 | 5 0 | 23 20 $\frac{1}{2}$ | | |
| 7 58 $\frac{1}{2}$ | 4 20 | 23 21 | | |
| 8 8 $\frac{1}{3}$ | 3 20 | 23 23 $\frac{1}{2}$ | | |
| 8 11 | 3 0 | 23 24 $\frac{1}{2}$ | | |
| 8 13 $\frac{1}{4}$ | 2 48 | 23 25 | | |
| 8 16 | 2 30 | 23 26 | | |
| 8 18 $\frac{1}{2}$ | 2 15 | 23 27 | | |
| 8 21 | 2 0 | 23 28 $\frac{1}{4}$ | | |
| 8 23 $\frac{2}{3}$ | 1 45 | 23 29 | | |
| 8 26 $\frac{1}{3}$ | 1 30 | 23 30 | | |

vlterius ☉ decliuem obseruare

non licuit.

- 8 41 $\frac{1}{2}$ Inferior limbus ☉ occidebat.
 8 43 $\frac{5}{6}$ ☉ medius occidebat.
 8 46 $\frac{1}{2}$ Superior limbus siue ☉ totus Horizontem subijt.

DIE 21 JUNIJ, MANE.

- 3 16 ☉ oriri limbo superiori videbatur.
 3 18 ☉ medius oriebatur.
 3 21 ☉ totus ortus.

| | Altitudo ☉ | | Declinatio ☉ | |
|--------------------|------------|---------------------|--------------|--|
| | G. M. | | Bor. G. M. | |
| 3 22 | 0 5 | 23 40 $\frac{3}{4}$ | | |
| 3 25 | 0 30 | 23 38 | | |
| 3 27 $\frac{1}{2}$ | 0 45 | 23 36 | | |
| 3 30 $\frac{1}{2}$ | 1 0 | 23 33 | | |
| 3 34 | 1 20 | 23 32 | | |
| 3 35 $\frac{3}{4}$ | 1 30 | 23 31 | | |
| 3 38 $\frac{1}{8}$ | 1 45 | 23 29 $\frac{1}{2}$ | | |
| 3 41 | 2 0 | 23 28 $\frac{1}{2}$ | | |

| | G. M. | G. M. |
|--------------------|-------|---------------------|
| 3 44 $\frac{1}{2}$ | 2 20 | 23 27 |
| 3 45 $\frac{1}{4}$ | 2 30 | 23 26 $\frac{1}{2}$ |
| 3 48 $\frac{1}{3}$ | 2 45 | 23 26 |
| 3 51 | 3 0 | 23 25 $\frac{1}{4}$ |
| 3 54 $\frac{1}{6}$ | 3 20 | 23 24 $\frac{1}{2}$ |
| 4 0 $\frac{1}{2}$ | 4 0 | 23 22 $\frac{1}{4}$ |
| 4 14 $\frac{1}{4}$ | 5 30 | 23 20 $\frac{1}{2}$ |
| 4 19 | 6 0 | 23 19 $\frac{1}{2}$ |
| 4 27 $\frac{1}{3}$ | 7 0 | 23 18 |
| 4 30 $\frac{1}{2}$ | 7 20 | 23 17 $\frac{3}{4}$ |
| 4 52 $\frac{1}{4}$ | 10 0 | 23 17 $\frac{1}{6}$ |
| 5 0 | 11 0 | 23 16 $\frac{3}{4}$ |
| 5 11 | 12 20 | 23 16 $\frac{1}{2}$ |
| 5 47 | 17 0 | 23 15 $\frac{1}{2}$ |
| 5 56 | 18 20 | 23 15 $\frac{1}{3}$ |
| 6 2 | 19 0 | 23 15 $\frac{1}{4}$ |
| 6 9 $\frac{1}{3}$ | 20 0 | 23 15 $\frac{1}{4}$ |

Horologium in Meridie 5 M. iusto citius mouebatur a Meridie proxime antecedenti.

Alt. ☉ Merid.

per Q. Tych. 57 18 $\frac{1}{3}$

per Q. Volub. 57 18 $\frac{1}{2}$

Declin. { vno 23 12 $\frac{1}{2}$

per Armillas subterr. { alt. 23 12 $\frac{1}{4}$

DIE 29 JUNIJ.

Alt. ☉ Merid. { vno 56 34 45

per Q. Tych. { alt. 56 35 0

per Q. Volub. 56 34 45

per regulas Ptol. maiores 5748

resp. 56 34 38

per Q. minim. 56 34 $\frac{1}{2}$

Declin. per Armill. 22 30 B.

altero 22 29 $\frac{1}{4}$

N. B. Erat bene serenum.

DIE 9 JULIJ.

Alt. ☉ Merid.

per Q. Tych. 55 6 $\frac{1}{2}$

per Q. Volub. 55 6 $\frac{1}{2}$

Declin. per Armill. { vno 21 0

subterr. { alt. 21 0 $\frac{1}{2}$

DIE 10 JULIJ.

Alt. ☉ Merid.

per Q. Tych. 54 55 $\frac{1}{2}$

per Q. Volub. 54 55 $\frac{3}{4}$

Decl. per Armillas sub. 20 50
N. B. Non erat satis ferenum.

DIE 12 JULIJ.

Alt. ☉ Merid.
per Q. Tych. 54 33 $\frac{1}{2}$
per Q. Volub. 54 33
Declin. per Armillas sub. { vno 20 27
{ altero 20 27 $\frac{1}{4}$

DIE 15 JULIJ.

Alt. ☉ Merid.
per Q. Tych. 53 56
per Q. Volub. 53 56 $\frac{1}{2}$
Declin. per Armillas { vno 19 51
{ alt. 19 50 $\frac{5}{6}$

DIE 25 JULIJ.

Alt. ☉ Mer.
per Q. Tych. vtroq. 51 33
per Q. Volub. 51 33
Declin. per Armill. 17 28
alt. pinnac. 17 27 $\frac{3}{4}$

DIE 27 JULIJ.

Alt. ☉ Merid. { nouo 51 0 $\frac{3}{4}$
{ vet. 51 0 $\frac{5}{6}$
per Q. Tych. 51 0 $\frac{5}{6}$
per Q. Volub. 51 0 $\frac{5}{6}$
Decl. per Armill., vtroque 16 55 $\frac{1}{2}$

DIE 5 AUGUSTI.

Horologium in Meridie vnico saltem scrupulo primo iusto tardius mouebatur, quod ad stellas vesperi antecedente fuit correctum.

Alt. ☉ Merid.
per Q. Tych. 48 22
per Q. Volub. 48 22 $\frac{1}{4}$
Declin. per Armillas sub. { vno 14 17 $\frac{1}{2}$
{ alt. 14 18

DIE 6 AUGUSTI.

Horologium in meridie 4 $\frac{1}{2}$ M. iustocius mouebatur, in Meridie proxime antecedente fuit recte constitutum.

Alt. ☉ Merid.
per Q. Tych. 48 3 $\frac{2}{3}$
per Q. Volub. 48 4
Declin. per Armill. 13 58 B.
alt. pinn. 13 57 $\frac{1}{2}$

DIE 7 AUGUSTI.

Alt. ☉ Merid. { nouo 47 44 $\frac{1}{2}$
{ vet. 47 44 $\frac{5}{6}$
per Q. Tych. 47 45 $\frac{1}{4}$
per Q. Volub. 47 45 $\frac{1}{4}$
Decl. ☉ per Armill. vno 13 39 $\frac{3}{4}$
alt. 13 39 $\frac{3}{8}$

DIE 8 AUGUSTI.

Alt. ☉ Merid. { nouo 47 25
{ vet. 47 25 $\frac{1}{6}$
per Q. Tych. 47 26
per Q. Volub. 47 26
per Sext. nou. 47 24 $\frac{5}{6}$
Decl. per Armill. vno 13 20
alt. 13 19 $\frac{5}{6}$

DIE 11 AUGUSTI.

Alt. ☉ Merid. { nouo 46 26 $\frac{1}{4}$
{ veteri 46 26 $\frac{1}{2}$
per Q. Tychon. 46 26 $\frac{1}{2}$
per Q. Volub. 46 26 $\frac{1}{2}$
Declin. per Armill. 12 21 B.
12 21 $\frac{1}{4}$

DIE 13 AUGUSTI.

Alt. ☉ Merid.
per Q. Tych. 45 46 $\frac{1}{3}$
per Q. Volub. 45 46 $\frac{1}{2}$
Declin. vno 11 41
per Armillas alt. 11 40 $\frac{1}{2}$

DIE 14 AUGUSTI.

Alt. ☉ Merid.
per Q. Tych., vtroque 45 25 $\frac{1}{2}$
per Q. Volub. 45 26
Declin. per Armill. 11 21 B.
alt. pinn. 11 20 $\frac{1}{4}$

DIE 16 AUGUSTI.

Alt. ☉ Merid. { 44 43 $\frac{1}{4}$
{ incerta
per Q. Tych. 44 45
per Q. Volub. 44 45
Decl. per Armill., vtroque 10 39 $\frac{1}{2}$

DIE 17 AUGUSTI A. M.

| H. M. | Declin. ☉ Bor. | Alt. ☉ |
|--------------------|---------------------|--------|
| 5 21 $\frac{3}{4}$ | 10 32 $\frac{1}{2}$ | 3 50 |
| 5 23 $\frac{1}{2}$ | 10 33 | 4 10 |
| 5 31 $\frac{3}{4}$ | 10 30 $\frac{3}{4}$ | 5 15 |
| 5 34 | 10 30 $\frac{1}{3}$ | 5 30 |
| 5 55 | 10 28 | 8 20 |

6 30 Haecenus mane erat apprimere ferenum.

Horologium in Meridie sequente iusto celerius mouebatur M. 4 $\frac{1}{2}$, qui error in præcedentibus temporibus a meridie præcedente est corrigendus.

Alt. ☉ in meridie per Volub. 44 24
Non erat exquisitè ferenum.

DIE 18 AUGUSTI A. M.

H. 4 57' 50" Sol incepit primum oriri super montes Glunæ.

4 59 50 Medius Sol ibidem ortus videbatur.

5 1 52 Totus Sol ortus est eodem in loco.

Confumit itaque Sol 4 minuta temporis inter oriendum & integrum gradum de cælo, cum tamen saltem dimidium gradum occupat sua quantitate visibili, id vero fit propter nimiam refractionem quæ ortum successivè remittendo inhibet.

| | Fuit ☉ declin. | Altit. ☉ |
|--------------------|---------------------|------------------|
| 5 21 | 10 15 | 2 42 |
| 5 22 $\frac{1}{2}$ | 10 14 | 2 51 |
| 5 23 | 10 13 $\frac{1}{4}$ | 2 59 |
| 6 51 | 10 4 | |
| 6 52 $\frac{1}{2}$ | 10 3 $\frac{1}{4}$ | |
| 6 53 | 10 3 $\frac{1}{4}$ | 15 $\frac{1}{2}$ |
| 7 43 25 | 10 2 $\frac{1}{4}$ | |
| 7 45 25 | 10 2 $\frac{1}{4}$ | |

N. B. Horologium in Meridie proximè sequenti 5' 10" iusto velocius mouebatur.

Alt. ☉ merid. per Q. Volub. 44 2 $\frac{2}{5}$
Decl. per Armillas subt. 9 57 $\frac{1}{4}$
Altero pinnac. Bor. 9 57 $\frac{1}{3}$

DIE 23 AUGUSTI.

Alt. ☉ Merid. } nouo 42 14
per Q. Tych. } vet. 42 14 $\frac{1}{6}$
per Q. Volub. incerta 42 15 $\frac{1}{2}$
Declin. per Armill., vtroque 8 9

DIE 25 AUGUSTI.

Alt. ☉ Merid.
per Q. Tychon. vtroque 41 29 $\frac{5}{6}$
per Q. Volub. 41 30 $\frac{1}{6}$
per Sext. nou. 41 30
per Q. Min. Nou. 41 30

Decl. ☉ per Armillas B. 7 25 $\frac{1}{4}$
alt. pinnacid. 7 25
Erat mediocriter ferenum.

DIE 28 AUGUSTI.

Alt. ☉ Mer.
per Q. Tych. 40 23
per Q. Volub. 40 23 $\frac{1}{2}$
per Sext. nou. 40 23 $\frac{1}{6}$
per Q. Min. nou. 40 23 $\frac{1}{2}$
Erat bene ferenum.

DIE 29 AUGUSTI.

Alt. ☉ Merid. } nou. pin. 40 0
per Q. Tych. } vet. 40 0 $\frac{1}{4}$
per Q. Volub. 40 0 $\frac{1}{2}$
Erat bene ferenum.

DIE 4 SEPTEMBRIS.

Alt. ☉ Merid.
per Q. Tych. 37 42 $\frac{1}{3}$
per Q. Volub. 37 42
Non fuit satis ferenum.

DIE 8 SEPTEMBRIS.

Alt. ☉ Merid.
per Q. Tych. 36 10

DIE 12 SEPTEMBRIS.

Alt. ☉ Merid.
per Q. Tych. 34 36 $\frac{2}{3}$
34 36 $\frac{1}{3}$
per Q. Volub. 34 37 $\frac{3}{4}$
per Sext. nou. 34 37 $\frac{1}{6}$
per Sext. vet. 34 37

DIE 18 SEPTEMBRIS.

Alt. ☉ Merid. } nou. pin. 32 15 $\frac{1}{6}$
per Q. Tych. } vet. 32 15 $\frac{1}{3}$
per Q. Volub. 32 16 $\frac{1}{4}$
per Sext. nou. 32 15 $\frac{1}{2}$
per Sext. vet. 32 15

DIE 19 SEPTEMBRIS.

Alt. ☉ Merid. } vet. 31 52
per Q. Tych. } nouo 31 51 $\frac{5}{6}$
per Q. Volub. 31 52 $\frac{1}{4}$
per Sext. nou. 31 52 $\frac{1}{6}$
per Sext. vet. 31 51 $\frac{5}{6}$
per Q. Max. 31 52 $\frac{1}{2}$
per Q. Min. 31 52 $\frac{1}{2}$
Erat bene ferenum & tranquillum.

DIE 20 SEPTEMBRIS.

| | |
|--|----------------------------|
| Alt. ☉ Merid. | { vet. 31 28 $\frac{1}{6}$ |
| per Q. Tych. | { nouo 31 28 |
| per Q. Maxim. | 31 28 $\frac{2}{3}$ |
| per Sext. nou. | 31 28 $\frac{3}{4}$ |
| per Reg. Minor. 9772 $\frac{1}{2}$, resp. | 31 30 |
| per Q. Min. | 31 27 $\frac{1}{2}$ |

Erat mediocriter serenum.

DIE 29 SEPTEMBRIS.

| | |
|----------------|----------------------------|
| Alt. ☉ Merid. | { vet. 27 36 $\frac{2}{3}$ |
| per Q. Tych. | { nouo 27 36 $\frac{1}{2}$ |
| per Sext. nou. | 27 37 |
| per Sext. vet. | 27 37 $\frac{1}{12}$ |
| per Q. Volub. | 27 37 |

DIE 1 OCTOBRIS.

| | |
|----------------|----------------------------|
| Alt. ☉ Merid. | { vet. 27 13 $\frac{2}{3}$ |
| per Q. Tych. | { nouo 27 13 $\frac{1}{2}$ |
| per Q. Volub. | 27 14 $\frac{1}{4}$ |
| per Sext. nou. | 27 14 $\frac{1}{4}$ |
| per Sext. vet. | 27 14 |

DIE 2 OCTOBRIS.

| | |
|----------------|----------------------------|
| Alt. ☉ Merid. | { vet. 26 51 |
| per Q. Tych. | { nouo 26 50 $\frac{2}{3}$ |
| per Q. Volub. | 26 51 $\frac{1}{3}$ |
| per Sext. nou. | 26 51 $\frac{1}{4}$ |
| per Sext. vet. | 26 51 |
| per Q. Min. | 26 51 |

DIE 3 OCTOBRIS.

| | |
|----------------|----------------------------|
| Alt. ☉ Merid. | { nouo 26 28 |
| per Q. Tych. | { vet. 26 28 $\frac{1}{3}$ |
| per Q. Volub. | 26 29 |
| per Q. Maxim. | 26 28 $\frac{1}{2}$ |
| per Sext. nou. | 26 28 $\frac{1}{3}$ |
| per Sext. vet. | 26 29 |
| per Q. Min. | 26 28 |

DIE 9 OCTOBRIS.

| | |
|----------------|--------------------------------|
| Alt. ☉ Merid. | { nouo 24 14 $\frac{2}{3}$ |
| per Q. Tychon. | { vet pin. 24 14 $\frac{3}{4}$ |
| per Q. Volub. | 24 15 $\frac{1}{6}$ |

Non erat fati serenum.

DIE 22 OCTOBRIS.

| | |
|----------------|----------------------------|
| Alt. ☉ Merid. | { vet. 19 46 $\frac{1}{6}$ |
| per Q. Tych. | { nouo 19 45 $\frac{5}{6}$ |
| per Sext. nou. | 19 46 $\frac{1}{2}$ |
| per Q. Volub. | 19 46 $\frac{3}{4}$ |
| per Q. Maxim. | 19 46 |

DIE 15 NOUEMBRIS.

| | |
|---------------|---------------------|
| Alt. ☉ Merid. | |
| per Q. Tych. | 13 24 |
| per Q. Volub. | 13 24 $\frac{1}{3}$ |

DIE 18 NOUEMBRIS.

| | |
|---------------|---------------------|
| Alt. ☉ Merid. | |
| per Q. Tych. | 12 50 |
| per Q. Volub. | 12 50 $\frac{1}{4}$ |

Erat bene serenum.

DIE 22 NOUEMBRIS.

| | |
|---------------|----------------------------|
| Alt. ☉ Merid. | { vet. 12 11 |
| per Q. Tych. | { nouo 12 10 $\frac{5}{6}$ |
| per Q. Volub. | 12 11 |

DIE 29 DECEMBRIS.

| | |
|----------------------|------------------------------|
| Alt. ☉ Merid. | { veteri 11 48 $\frac{1}{3}$ |
| per Q. Tich. | { altero 11 49 |
| per Q. Volub. | 11 48 $\frac{1}{3}$ |
| Declin. per Armillas | vno 22 17 $\frac{1}{2}$ |
| | altero 22 17 $\frac{1}{4}$ |

Erat mediocriter serenum.

LOCA SOLIS.

| Die | Alt. ☉ observ. | Parall. | Vera Alt. | Decl. ☉ | Long. ☉ | Ephemerides nostræ dant |
|----------|------------------------------|---------|----------------------|--------------------|--------------------------|-------------------------|
| 25 Feb. | 28 42 30 28 42 45 | 2 36 | 28 45 6 28 45 21 | 5 20 14 5 19 59 | 16 31 10 ☾ 16 31 50 ☾ | 16 28 16 ☾ |
| 28 — | 29 52 25 29 52 35 | 2 34 | 29 54 59 29 55 9 | 4 10 21 4 10 11 | 19 29 35 ☾ 19 30 0 ☾ | 19 27 40 ☾ |
| 9 Mart. | 33 25 30 33 25 0 | 2 30 | 33 28 0 33 27 30 | 0 37 20 0 37 50 | 28 26 25 ☾ 28 25 10 ☾ | 28 23 55 ☾ |
| 10 — | 33 48 35 33 48 50 | 2 28 | 33 51 3 33 51 18 | 0 14 17 0 14 2 | 29 24 12 ☾ 29 24 50 ☾ | 29 23 18 ☾ |
| 17 — | 36 33 30 36 34 0 | 2 23 | 36 35 53 36 36 23 | 2 30 23 2 30 53 | 6 17 30 √ 6 18 45 √ | 6 18 3 √ |
| 12 Sept. | 34 37 0 34 36 20 | 2 27 | 34 39 27 34 38 47 | 0 33 57 0 33 17 | 28 34 55 ☾ 28 36 33 ☾ | 28 37 56 ☾ |
| 28 Feb. | Ex Ephemeridibus Prut. Mæst. | | | 18 55 0 ☾ | | |
| 9 Mart. | Magini | | | 27 51 45 ☾ | Cypriani | 28 39 39 ☾ |
| 10 — | | | | 28 51 14 ☾ | | 29 38 52 ☾ |
| 17 — | | | | 5 46 50 √ | | 6 32 17 √ |
| 12 Sept. | Prut. Mæst. | | | 28 34 0 ☾ | | 28 38 58 ☾ |

OBSERVATIONES LUNÆ.

DIE 6 JANUARIJ.

Observatio ☾ a ☉.

Posito loco ☉ in $25^{\circ} 57\frac{1}{2}^{\circ}$ M ☿ qualem Ephemerides nostræ exhibent in Merid., observabatur per Armillas Zodiacales occident. Limb. ☾ in

| | |
|--|---|
| 12 ^H 32 ¹ / ₄ M | I 21 ^G 46 ^M √ |
| 12 36 ¹ / ₆ | II 21 50 √ |
| 12 37 11 | III 21 52 ¹ / ₂ √ |
| 12 38 38 | IV 21 55 √ |
| 12 39 0 | V 21 56 ¹ / ₄ √ |

Non erat satis exacte serenum, mediocres tamen sunt hæ observationes, et Luna nondum ad 90 gradum peruenisset, eo enim P. M. circa H. 3 primum venit. Potes autem potius fidere duabus postremis observationibus, limitando eas inter se.

Horologium in meridie correctum. Refractio etiam vtroque tam in ☉ quam in ☾ hic aliquid ingerit obstaculi. H. 3 27' ☾ in 90 gradu ab ascendente juxta supputationem.

2 31 26 Posito loco ☉ in 26 G. 2 M. ☿ observabatur occidentalis limb. ☾ in

| | G. M. | Altitudo ☉ G. M. |
|---------|---|---------------------|
| | 22 43 √ | 6 50 |
| 2 38 10 | II 22 47 √ | 6 20 |
| 2 41 16 | III 22 47 ¹ / ₂ √ | 6 0 |
| 2 45 25 | IV 22 48 √ | 5 45 |
| 2 49 23 | V 22 49 ¹ / ₄ √ | 5 15 |

Postea observabatur ☾ in quadratura juxta Apogæum, idque prope 90 grad. a ☉, cum nullæ aliæ stellæ apparerent, in hunc modum.

| Tempus correctum | Dist. ♀ et occ. limb. ☾ | Azim. ♀ occid. | Altitudo ♀ |
|------------------------------|----------------------------|-------------------|---------------------|
| H. M. | G. M. | G. M. | G. M. |
| 3 29 | 42 28 | 7 58 | 28 45 $\frac{1}{2}$ |
| 3 31 $\frac{1}{3}$ | 42 28 $\frac{1}{6}$ | | |
| 3 33 $\frac{1}{4}$ | 42 29 | 10 12 | 28 56 |
| 3 35 | 42 30 | | |
| 3 37 $\frac{3}{4}$ | 42 31 $\frac{1}{4}$ | | |
| Repetita 42 32 $\frac{1}{3}$ | | | |

N. B. Hæ obseruationes ☾ ad ♀ sunt
fatis bonæ, potes autem vti loco ♀ ex
sequentibus.

3 45 Obseruabatur Declinatio
super. Limbi ☾ 7 43
infer. Limbi ☾ 7 13
30

Ergo declinatio centri
☾ bor. 7 28

Huic potes applicare cæteras
obseruationes, nam declinati-
ones prius annotatæ non sunt
veræ.

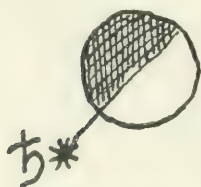
5 15 Distabat Medium ☾ a ♀ per Rad.
1 55
quasi applicans ipsi ♀ corpora-
liter.

5 34 37" Transiuit occid. Limbus ☾
per Merid. et habuit Alt.
super. cornu 42 5 $\frac{1}{6}$
infer. cornu 41 35 $\frac{1}{4}$
Differentia 0 29 $\frac{5}{6}$

Eodem tempore Alt. M.
super. cor. ☾ 42 5 $\frac{1}{3}$
inferioris cornu 41 34 $\frac{1}{3}$
0 31

♀ occid. Luc. ☾ or. Dist. æquat.
G. M. G. M.

5 39 23" 42 1 $\frac{1}{4}$ 2 9 $\frac{1}{2}$ 44 10 $\frac{3}{4}$



N. B. Quam prope ☾ ♀^{um} attigit hoc vesperi.
H. 10 M. 4 Quando oculus ☾ distabat a Meridiano versus oc-
casum 27 Gr. 50 M. tunc ambo cornua ☾ in quadratura exi-
stentia dirigebantur exquisitè in ♀ quoad videre licuit. Dist-
abat enim ♀ ab inferiori limbo ☾ cornuque australi versus au-
strum scrupulis 12. Nam plus tertia parte Diametri Lunar-
is, et minus a media parte videbatur distare ab inferiori cornu
☾ versus austrum. Radius præbuit distantiam inferioris cornu et ♀ circa con-
iunctionem 12 M. Potes autem sumere distantiam ab inferiori cornu ☾ in ipsa
☾ cum ♀^{no} 13 scrupulorum, et insensibiliter aberrabis. Quod etiam Petrus et

¹ E codice V.

Ex hac et præcedenti potest etiam
tempus restitui quo ☾ occid. Limbus
transiuit Meridianum. Horologium
enim in Meridie erat correctum satis
exacte.

Pro loco ☾.

3^H 29 $\frac{1}{2}$ ^M Inter ♀ et occid. limbum ☾
42 28

Semidiam. ☾ adden. 15

Distantia centri ☾ et ♀ 42 43

Declin. centri ☾, Bor. 7 25

Declinatio ♀ austral. 6 28

Latus BA 96 28

Latus CA 82 35

BC 42 43

BAC 40 29 58"

Afc. Recta ♀ 341 47

Afcensio Recta ☾ 22 17

Afcensio ☾ 22 17

Declin. Bor. 7 25

resp. Long. 23 21 23^V

3^H 38^M Distantia eadem 42 31 $\frac{1}{4}$

3 27 Locus ☾

fuit in 90 Gradu

3 29 $\frac{1}{4}$ Distantia centri ☾ 42 46 $\frac{1}{4}$

Declinatio Bor. 7 26

BA 96 27 $\frac{1}{2}$

CA 82 34

BC 42 43

BAC 40 33 31"

Afc. Recta ☾ 22 20 $\frac{1}{2}$ Longitudo 23 25^V.

Declin. Bor. 7 26 Latitudo 1 49 $\frac{1}{6}$ M.

Tychon. Alphonf. Copern.
Calc. Calc. Calc.

Long. ☾ 23 21 $\frac{1}{3}$ ^V 23 2 ^V 23 12 ^V

Latit. ☾ 1 48 $\frac{5}{6}$ M. 0 57 M. 0 58 $\frac{1}{2}$ M.

1 49 43¹

iuxta tabulas correctas.

Gellius apud superiora instrumenta eodem modo animaduenterunt in ipsa ζ vtriusque paulo minus semidiametro remotæ inuicem.

Hincque ex dato loco η^{ni} et tempore per stellas verificato, locoque ζ ex antecedentibus, cum per 90 Gr. transiret, correcto, potes parallaxin ζ rectius investigare, quam hactenus ab antecessoribus nostris factitatum est. Erat autem ζ circa apogæum suum, et in \square a Sole quod plurimum facit ad rei inquirendæ perfectam rationem.

Nota. Petrus Jacobi et Gellius Sacerides superius apud Armillas australes obseruauerunt quod tum cum ζ visibiliter jungeretur η trahendo lineam per vtriusque apicem ζ , distabat lucida γ a meridiano 64 Gr. 45 M. Inde colligitur tempus fuisse Hor. 10 M. 9 $\frac{1}{2}$ P. M. At juxta meas proprias obseruationes quas fecimus diligenter, in obseruatorio subterraneo, distabat tunc Aldeboram a Merid. occid. 27 Gr. 50 M. quod facit in tempore H. 10 M. 10. 13 S. Satis itaque exacte consentit vtraque obseruatio, quod H. 10 M. 10 fuerat visibiliter η et ζ coniunctio. *Fuit autem tunc ex obseruationibus antecedentibus locus η in 26 Gr. 1 M. γ , Latitudo 2 Gr. 27 $\frac{1}{2}$ M. Mer. Hinc locus ζ colligi potest.*

H. 3 M. 27 quando ζ fuit in 90 Gr. ab ascendente erat ex obseruatione Longitudo eius 23 Gr. 20 $\frac{1}{2}$ M. γ . Latitudo 1 Gr. 48 $\frac{3}{4}$ M.

DIE 9 JANUARIJ, P. M.

ζ hoc vesperi in 90 gradu horizontalis circa horam completam 7 $\frac{1}{6}$ P. M. Obseruabatur ζ a ζ per Armillas Æquatorias in hunc qui sequitur modum.

4^H 17^M Declin.

super. cornu ζ Bor. 16 3
4 18 inferior. cornu ζ 15 33 $\frac{1}{6}$
Diameter 0 29 $\frac{5}{6}$
Ergo declinatio
vera centri ζ 15 48

4 22 Declin. Bor.

super. cornu ζ 16 3 $\frac{1}{4}$
4 23 inferior. cornu ζ 15 33
Diameter lunæ app. 0 30 $\frac{1}{4}$
Et vera centri ζ
declin. 15 48 B.
vt prius.

Postea obseruabatur ζ a ζ in æquat. dist. vt sequitur.

| Occ. limb. ζ or. | ζ occid. | Dist. æquat. | Altitudo ζ | ζ |
|---------------------------|---------------------|---------------------|---------------------|-------------|
| 4 27 $\frac{1}{2}$ | 50 19 | 24 30 | 74 49 | 35 20 25 40 |
| 4 33 $\frac{1}{2}$ | 48 55 $\frac{1}{4}$ | 25 55 $\frac{1}{2}$ | 74 50 $\frac{3}{4}$ | 35 30 25 10 |
| 4 35 $\frac{1}{2}$ | 48 27 $\frac{1}{2}$ | 26 23 | 74 50 $\frac{1}{2}$ | 35 45 25 5 |
| 4 37 $\frac{1}{2}$ | 47 55 | 26 56 $\frac{1}{4}$ | 74 51 $\frac{1}{4}$ | 36 2 24 55 |

¹ Lineis inducæ.

Nota. Quod vbique accipiebatur altitudo super. cornu & dist. occ. limbi ζ a ζ .

4 41 $\frac{1}{2}$ Declin.

super. cornu ζ 16 6
infer. cornu ζ 15 35
Diameter ζ 0 31
Ergo declin. centri ζ 15 50 $\frac{1}{2}$

Postea obseruabatur ζ vicina 90 Grad. in hunc qui sequitur modum.

6 58 Declin. super. cornu ζ 16 17 $\frac{1}{2}$
6 58 $\frac{3}{4}$ Decl. infer. 15 46

Differentia 0 31 $\frac{1}{2}$

Declinatio centri ζ 16 2 fere

7 0 lucida γ occidentalis 20 22
distabat tunc occ. limbus ζ ab hac ipsa stellap. Sext. 32 12 $\frac{1}{2}$ ¹
7 3 cum luc. γ et occid. 21 10 $\frac{1}{8}$
dist. ζ vt prius 32 13¹

Hæ distantiae non sunt satis certæ, sed confer cum sequentibus.

N. B. Prouenit locus ζ H. 6 M. 58 quando erat in ipsissimo 90 gradu, ex obseruatione 1^{re} 0 $\frac{1}{2}$ ' II, ex calculo Alphonsino 2^{re} 0' II, ex Copernico 1^{re} 45' II. Excedit itaque Alphonsi. 1 grad. & Copern. $\frac{3}{4}$ grad.

| | Luc. γ occ. | Occ. limb. (or. | Dist. æquat. |
|--------------------|------------------------------------|---------------------|--------------------------|
| 7 5 | 21 40 | 11 51 | 33 31 |
| | | pone | 33 30 $\frac{1}{2}$ |
| 7 6 | 21 54 | 11 36 $\frac{1}{4}$ | 33 30 $\frac{1}{4}$ |
| | | pone | 33 31 |
| 7 7 $\frac{1}{2}$ | 22 16 $\frac{1}{2}$ | 11 15 $\frac{1}{4}$ | 33 31 $\frac{3}{4}$ |
| 7 8 $\frac{2}{3}$ | 22 34 $\frac{1}{6}$ | 10 58 $\frac{1}{4}$ | 33 32 $\frac{1}{2}$ fere |
| 7 10 $\frac{3}{4}$ | 23 5 $\frac{1}{4}$ | 10 28 | 33 33 $\frac{1}{4}$ |
| 7 14 | Declin. super. cornu (16 20 | | |
| 7 15 | infer. cornu (15 47 $\frac{1}{2}$ | | |
| | Diameter 0 32 $\frac{1}{2}$ | | |
| 7 17 $\frac{1}{2}$ | Repet. decl. super. cornu (16 20 | | |
| 7 17 $\frac{1}{2}$ | inferioris 15 47 $\frac{1}{2}$ | | |
| | 0 32 $\frac{1}{2}$ | | |

Ergo declinatio centri (16 4 fere.

Postea rursus accipiebatur distantia occ. limbi (a luc. γ per Sextantem in hunc modum.

| | Luc. γ occid. | Dist. occ. limbi (a luc. γ per sext. |
|--------------------|-------------------------|--|
| 7 21 $\frac{1}{3}$ | 25 48 | 32 15 $\frac{1}{2}$ |
| 7 22 $\frac{2}{3}$ | 26 7 | 32 16 |
| 7 23 $\frac{3}{4}$ | 26 28 | 32 16 $\frac{1}{4}$ |

Post M. N. γ visibilis (et Aldeboræ.

H. 1 M. 42 $\frac{1}{3}$ quando cor Ω distabat a Meridiano ad occasum 0 Gr. 46 $\frac{1}{4}$ M. tunc (proxime applicabat ad oculum γ , quoad visu discernere licuit, ita ut oculus γ videretur in linea recta per vtrumque cornu (ducta, distans ab inferiori limbo (ad austrum, interuallo diametri Lunaris quam proxime. Accepta est autem tum temporis intercapedo Aldeboræ ab inferiori limbo (sibi proximo per Sextantem Δ veterem 0 G. 29 M. bis. Tunc fuit altitudo inferioris limbi (15 40 per Quad. Volubilem.

Nota. Fuit itaque tunc vera longitudo (4 Gr. 44 M. Π adhibita parallaxi, quæ reperiebatur juxta 90 Gr. Hinc poterit indagari examinarique parallaxis (adhibito eius loco, quem habuit circa 90 Grad. antecedentem & die sequente.

Hæc observatio fiebat inferius in observatorio subterraneo et provenit hinc tempus conjunctionis visibilis (et Aldeboræ Hor. 1 M. 42 $\frac{1}{3}$ quod fere cum horologio consentit. Verum considerando vna sequentem observationem superius factam a diuersis observatoribus, et alio instrumento Armillarum provenit tempus Hor. 1. 40 $\frac{3}{4}$ M. Pone itaque verum tempus H. 1 M. 42 Post M. N., insensibiliter.

¹ Ad finem huius anni hæc observatio sic transcripta est in codice V:

Die 9 Januarij. Per Q. Tychon. Vespertino tempore.
Superior limbus (in merid. 50 28
alt. 50 28 $\frac{1}{3}$
Inferior limbus (in merid. 49 55 $\frac{1}{3}$
alt. 49 56 fere.

7 25 Repetita decl.

super. cornu (16 21
7 26 $\frac{1}{2}$ inferioris 15 49

Ergo declinatio centri (16 5

His observationibus lunaribus potes certo te fundare, præsertim ijs quæ per Armillas habebantur et vltimis per sextantem acceptis. Nam priores duas quidam studiosorum minus peritus huius rei capiebat per Sextantem.

7^H53^M40^S Occid. limbus (per Merid. & habuit Altitud. per volub. cornu superius 50^G. 29 $\frac{1}{2}$ M. inferius 49 58

Per Muralem, superioris 50 28
inferioris 49 56¹

Habuit tunc. luc. γ
dist. merid. 33 54
occ.

8 6 15 Transiit Aldeb.
Merid. altit. 49 41 $\frac{3}{4}$

Hinc poterit etiam verificari locus (ex interuallo temporis inter vtrosque transitus.

Nota. Vera longitudo ☾ fuit ex antecedent. et sequentibus 4 Gr. 32 M. vnde parallaxis longit. erat saltem 31 cum deberet esse respectu priorum 43 ad minimum.

In obseruatorio vero superiori versus Meridiem per Armillas minores æquatorias obseruarunt Petrus Jacobi et Gellius Salscerides seorsim, quod tunc cum linea recta ab utroque apice ☾ duceretur in Aldeboram, distaret Canis Minor a Meridiano versus occasum P. 37 M. 30 ita vt linea recta per ☾ centrum ab Ecliptica duci videretur. Distantia vero ab inferiori cornu ☾ ad ipsam stellam apparuit quasi ad quantitatem diametri lunaris apparentem. Verum Petrus Jacobi obseruauit eandem distantiam per Radium tunc 0 Gr. 30 M. quod satis bene cum præcedentibus obseruationibus eodem tempore alio in loco a diuersis obseruatoribus per alia organa habitis conuenit, tempus autem quod colligitur e distantia hac Canis minoris a Meridiano Occidentali est 1.40 $\frac{1}{2}$ M. P. M. N



Examinatio præcedentis obseruationis ☾ ad Aldeboram collata cum ea quæ fuit iuxta 90 gradum in ☾¹.

Quia diameter ☾ est 32 igitur limbus eius proximus habet latitudinem 4 Gr. 58 M. liquidem. Aldeboræ est 5 Gr. 30 M. et centrum ☾ eandem 4 42 quo ad visam latitudinem, quare cum vera latitudo fuerit tunc iuxta numerationem tabularum præcise 4 Graduum, hinc parallaxis latitudinis 42'. Parallaxis vero in circulo altitudinis existit 57', iuxta Altitudinem 16 Gr. ☾. Ergo cum dentur duo latera in triangulo rectangulo, datur etiam tertium per 7 Reinholdi primi Mobilis vel 2 dogma planorum nostrum. Quod euadit absoluta operatione Minutorum 38 & est Parallaxis Longitudinis. At ex supputatione ad 90 gradum H. 6 M. 58 quando luna erat 1 Gr. 1 M. ☿ fuit interuallum H. 6 M. 44 cumque motus diurnus ☾ iuxta sequentem obseruationem factam paulo ante 90 gradum diei mox insequentis adhibita correctione sit 12 Gr. 34' fuit locus ☾ verus prædicta Hora in 4.33 ☿, cum tamen adhibita parallaxi longitudinis debuisset tunc esse in 4 Gr. 39 M. ☿ (fuit enim H. 6.58' cum esset in 90 in 1 Grad. 1 M. ☿) differentia existente 6 scrupulorum, quæ vix ob id euenit quod parallaxin huius, tanquam in Ecliptica esset ☾, scrutati sumus. Nam vix vnico Minuto ob id minor redderetur, sed existimo potius factum, quia luna maiorem refractionem circa grad. 15 Altitudinis ingerebat, quam Aldeboram, ideoquo citius videbatur coniungi cum stella quam reuera accidit ipsa refractione parallaxin longitudinis aliquantulum minorem efficiente, ita vt apparuerit saltem 32' cum debuisset esse 38', cuius experimentum in alijs lunaribus obseruationibus institui poterit. In Sole vix 3 scrupulorum vel circiter fieret hæc refractione in longitudinem. An in ☾ quod vaporibus sit vicinior, et hebetiori lumine splendeat, maior euadat, periculum faciendum erit.

N. B. Inquisiui etiam ex calculo Prutenico parallaxin ☾ ad vtraque tempora, tam cum esset iuxta 90 Gradum quam cum in altitudine 16 fere partium, & inueni quod iuxta Hor. 7 e distantia a vertice dupla 83^g et duplata ☾ a ☉ 254 atque anomalia eius coæquata prouenit parallaxis in circulo altitudinis M. 35 $\frac{1}{2}$. In posteriori vero ex altitudine 16 partium & ob id duplata distantia 148 a vertice & duplici longitudine 260 $\frac{1}{2}$, anomaliamque coæquata 36 $\frac{1}{2}$, proue-

¹ Postea a Tychone in duobus foliis conscripta, quæ in codice D inserta sunt.

nit parallaxis in circulo altitudinis 51 M. fere, quibus respondet parallaxis Longitud. $36\frac{1}{2}$ et parallaxis Latitudinis 35 M., atque sic fuit \angle longitudo vera tunc 4 Gr. $37\frac{1}{2}$ M. II
 motus vero proprius a 90 Gr. hucusque erat 3 Gr. $31\frac{1}{2}$ M.
 fuit itaque \angle tunc in 1 6 II
 sed obseruabatur per instrumentum in 90 1 1 II
 Differentia 0 5 M.

Notandum vero, quod cum latitudo vera secundum numerationem fuerit H. 1 M. 42 quando iungebatur Aldeboræ 4 Gr. 0 M. et parallaxis latit. e calculo proueniens sit 35, debet tunc habere latitudinem visam 4 Gr. 35 M. Meridianam, quæ in cælo videbatur (vt e præcedentibus patet) 4 Gr. 42 M., et ob id 7 Minutis iusto maior. Cuius rei causa alias inquirenda venit.

Nota. Ego postea inueni quod error sensibilis lateat in latitudine \angle maxima, quam ego quarta parte gradus Ptolemaica maiorem adinveni, hæc si hic applicetur multo melius omnia quadrabunt.

DIE 10 JANUARIJ P. M.

Obseruatio \angle cum appropinquaret 90 gradui.

H. 7 $2\frac{1}{2}$ Decl. super. limbi \angle 17 $41\frac{1}{2}$
 inferioris 17 11
 Diameter \angle 0 $30\frac{1}{2}$
 Declin. centri 17 26

| | \angle orient. | Occ. limb. \angle or. | Dist. æquat. | Alt. sup. cornu \angle |
|-----------------------|---|----------------------------|--------------------|-----------------------------|
| 7 ^H 9' 40" | 48 $14\frac{3}{4}$ | 22 32 | 25 $42\frac{3}{4}$ | 48 $\frac{1}{6}$ |
| 7 10 41 | 48 0 | 22 $16\frac{1}{2}$ | 25 $43\frac{1}{2}$ | |
| 7 11 45 | 47 43 | 22 1 | 25 42 | 48 17 |
| 7 13 0 | 47 $22\frac{1}{2}$ | 21 43 | 25 $39\frac{1}{2}$ | 48 20 |
| 7 14 30 | 46 58 | 21 18 | 25 40 | 48 26 |
| 7 17 31 | 46 $14\frac{1}{2}$ | 20 35 | 25 $39\frac{1}{2}$ | 48 $39\frac{5}{6}$ |
| 7 19 51 | 45 $37\frac{1}{2}$ | 20 1 | 25 $36\frac{1}{2}$ | 48 50 |
| 7 22 | Repetita declin. super. cornu \angle 17 42 48 $58\frac{1}{2}$ inferioris 17 $12\frac{1}{2}$ Diameter 0 $29\frac{1}{2}$ | | | |
| 7 26 25 | 44 $1\frac{3}{4}$ | 18 26 | 25 $35\frac{3}{4}$ | 49 $17\frac{1}{2}$ |
| 7 27 55 | 43 $39\frac{1}{2}$ | 18 $3\frac{3}{4}$ | 25 $35\frac{3}{4}$ | 49 21 |

Non fuit satis serenum,
 sed per intermedias nubes observ.

Postea repetebantur obseruationes.

8 10 Declin. super. limbi \angle 17 $44\frac{1}{4}$
 inferioris 17 15
 Differentia 0 $29\frac{1}{4}$

8 $15\frac{1}{2}$ Declin. super. limbi 17 43
 inferioris 17 16
 Alt. sup. cornu \angle 51 $24\frac{1}{2}$
 \angle fuit hoc vesperi in 90 gradu
 H. 8 M. 0.

Nota. Ad horam 7.28 M. qua luna capiebatur a \angle per distant. æquat. 25 Gr. $35\frac{1}{2}$ M. fere, & a centro eius 25 20, declinatione existente 17 27, fuit longitudo eius in 13 52 M. II cum Latit. 5 $7\frac{1}{2}$ Merid. visa. At quia fuit dimidia hora ante 90 gradum, fuit parallaxis Longit. quasi $4\frac{1}{2}$ auferenda, quare vera longitudo ad dictum tempus 13 $47\frac{1}{2}$ II
 Prutenic. Calcul. habet 14 29
 Alphonsinus habet 14 32

DIE 15 JANUARIJ A. M.

1^H 37' A. M. \angle in 90 gradu ab Ascendente juxta supputationem.
 12 16 $\frac{1}{2}$ Occ. limb. \angle fuit in Merid., habuitque super. limbus altitudinem 47 $19\frac{1}{4}$
 12 18 30" Orient. limb. \angle in Merid., alt. infer. limbi \angle 46 $45\frac{1}{2}$
 Diameter \angle apparens 0 $33\frac{1}{4}$
 12 56 $\frac{1}{2}$ Declin. super. limbi \angle 13 $6\frac{1}{2}$ B.
 inferioris 12 $34\frac{1}{2}$
 Diameter \angle 0 32
 Declin. centri \angle 12 $50\frac{1}{2}$

| | Or. limb. ☾ occ. | Cor ☉ or. | Dift. æquat. |
|---------|---------------------|--------------------|---------------------|
| 1 3 8 | 10 45 $\frac{1}{2}$ | 4 3 $\frac{1}{2}$ | 14 49 |
| 1 5 20 | 11 18 $\frac{1}{2}$ | 3 31 | 14 49 $\frac{1}{2}$ |
| 1 7 25 | 11 49 | 2 59 | 14 48 |
| 1 8 50 | 12 11 $\frac{1}{2}$ | 2 35 $\frac{1}{2}$ | 14 47 |
| 1 10 58 | 12 40 $\frac{1}{2}$ | 2 6 | 14 46 $\frac{1}{2}$ |
| 1 13 15 | 13 14 | 1 30 $\frac{1}{2}$ | 14 44 $\frac{1}{2}$ |

1 16 $\frac{1}{4}$ Declin. super.

limbi ☾ 13 3 $\frac{1}{2}$

Inferioris 12 31

Diameter 0 32 $\frac{1}{2}$

Tunc fuit Alt. super. limbi ☾ 45 38

| | ☿ occid. | Or. limb. occ. | Dift. æquat. |
|-----------------------------|---------------------|---------------------|---------------------|
| 1 23 40 | 49 41 $\frac{1}{2}$ | 15 44 $\frac{3}{4}$ | 33 56 $\frac{3}{4}$ |
| 1 25 55 | 50 12 $\frac{1}{2}$ | 15 15 $\frac{1}{2}$ | 33 57 |
| 1 27 37 | 50 45 | 16 50 | 33 55 |
| 1 30 2 | 51 15 $\frac{1}{2}$ | 17 19 | 33 56 $\frac{1}{2}$ |
| 1 31 25 | 51 40 $\frac{1}{2}$ | 17 42 | 33 58 $\frac{1}{2}$ |
| 1 34 Declin. super. limbi ☾ | | 13 1 | |
| Inferioris | | 12 29 $\frac{3}{4}$ | |
| Diameter | | 0 31 $\frac{1}{4}$ | |

Inter or. limb. ☾ et ☿ per Sext. Δ Vet.

| | | |
|---------|---------------------|------------------|
| 1 40 30 | 33 59 $\frac{3}{4}$ | bona, vtere hac. |
| 1 41 21 | 34 0 $\frac{1}{4}$ | Bonæ obserua- |
| 1 42 5 | 34 0 $\frac{5}{6}$ | tiones iuxta |
| 1 43 29 | 34 1 $\frac{1}{4}$ | 90 Grad. |

| | |
|-------------------------------|---------------------|
| 1 47 Repetita declin. limbi ☾ | |
| super. | 12 59 $\frac{3}{4}$ |
| Inferioris | 12 26 $\frac{1}{2}$ |
| Diameter | 0 33 $\frac{1}{4}$ |

Inter or. limb. ☾ et cor ☉ per Sext. Δ veterem.

| | |
|--------------------------|--------------------|
| 1 54 $\frac{1}{2}$ | 14 9 |
| 1 55 $\frac{1}{2}$ | 14 7 $\frac{3}{8}$ |
| 1 56 Eadem repetita | 14 7 |
| 1 58 Repetita | 14 6 $\frac{1}{2}$ |
| 2 0 Decl. super. limbi ☾ | 12 57 |
| inferioris | 12 25 |
| Diameter | 0 32 |

Antecedentes hæ obseruationes ☾ cœlo mediocriter sereno sunt factæ.

EODEM DIE 15. JANUARIJ.

P. M. H. 5 52' 32" oriebat medium corporis ☾ & habuit tunc Aldeb. dist. a Merid. 27 18 orient

Obseruatio ☾ per Sext. propter eius parallaxin indagandam.

| | Inter ☿ et orient. limb. ☾ | Alt. sup. limb. ☾ |
|-----------------------------|-------------------------------|----------------------|
| 7 45 50 | 45 15 | 14 50 |
| 7 48 0 | 45 15 $\frac{3}{8}$ | 15 8 $\frac{1}{2}$ |
| 7 53 59 | 45 16 | 15 55 $\frac{1}{2}$ |
| 7 55 5 | 45 17 | 16 3 |
| 7 56 15 | 45 19 | 16 12 |
| 7 57 0 Declin. sup. limbi ☾ | | 10 17 |
| 8 0 30 | 45 21 | 16 44 |
| 8 1 25 | 45 22 | 16 55 |
| 8 2 20 | 45 23 $\frac{1}{2}$ | 17 0 |
| 8 3 16 | 45 24 | 17 8 |

| | Orient. limb. ☾ or. | Aldeb. occ. | Dift. æqua. | Alt. sup. limb. ☾ |
|-----------------------------|------------------------|--------------------|---------------------|----------------------|
| 8 14 | 72 10 | 8 8 $\frac{2}{3}$ | 80 18 $\frac{2}{3}$ | 18 34 |
| 8 16 $\frac{1}{3}$ | 71 37 | 8 44 | 80 21 | 18 43 |
| ☿ orient. | | | | |
| 8 20 | 70 43 $\frac{2}{3}$ | 25 7 $\frac{1}{2}$ | 45 36 $\frac{1}{6}$ | 19 19 |
| 8 22 | 70 10 $\frac{3}{4}$ | 24 34 | 45 36 $\frac{3}{4}$ | 19 36 |
| 8 25 Declin. infer. limbi ☾ | | | | 9 44 |

Bor.

Postea denuo ☾ a ☿
per Sext.

| | Alt. infer. limb. ☾ |
|--------------------------------------|------------------------|
| 8 32 Inter ☿ & or. | 45 40 $\frac{1}{4}$ |
| 8 33 $\frac{5}{6}$ limb. ☾ | 45 42 |
| 8 35 $\frac{1}{3}$ | 45 43 |
| 8 37 | 45 43 $\frac{1}{2}$ |
| 8 40 $\frac{1}{2}$ Inter or. limb. ☾ | 36 53 $\frac{1}{4}$ |
| 8 42 $\frac{2}{3}$ infer. caput II | 36 54 $\frac{1}{4}$ |
| 8 44 $\frac{1}{4}$ | 36 55 $\frac{1}{4}$ |
| 8 50 $\frac{1}{3}$ | 36 57 $\frac{1}{2}$ |
| 8 46 Declin. sup. limb. ☾ | 10 10 $\frac{1}{4}$ |
| 8 48 inferioris | 9 38 $\frac{1}{2}$ |
| Diameter ☾ | 0 31 $\frac{3}{4}$ |
| Ergo declin. centri ☾ | 9 54 |

fere

Videbatur ☾ in eadem longitudine cum corde ☉, nam linea ducta a corde per ipsam incidebat fere in polum Eclipticæ, parua existente differentia.

| | |
|--------------------|--------------------|
| 9 8 Declin. super. | |
| limb. ☾ | 10 7 $\frac{3}{8}$ |
| Inferioris | 9 34 |
| Diameter ☾ | |
| appar. | 0 33 $\frac{2}{3}$ |

9 12½ *Repetita*

decl. super. 10 7½

Inferioris limbi 9 34

Diameter (

appar. 0 33½

Fuit tunc alt. infer. limbi (25 38½

9 22 Inter. bor. limb. (4 40 26 45

9 24½ & Regulum 4 41 27 7

9 27 4 40 27 25

N. B. Hæc differentia inter Regulum & (erat saltem ratione latitudinis, nam longitudo ferme erat eadem.

Omnes autem hæc obseruationes in (factæ sunt propter parallaxin indagandam.

DIE 16 JANUARIJ A. M.

Obseruatio (circa 90 gradum.

Debet autem (esse in 90 Gr. iuxta horam tertiam P. M. N.

2 46 40 Declin.

super. limbi (Bor. 9 17

Inferioris 8 43

Diameter 0 34

Canis min. Or. limb. Dist.
occ. (occ. æquat.

2 54 10 62 5½ 24 54¾ 37 10¾

2 57 15 62 50 25 36¼ 37 13¾

2 59 0 63 15¼ 26 4¾ 37 10½

Hinc potest verificari horologium quamuis non esset bene serenum.

Per Sextant. trigonicum.

3 1 40 Inter or. limb. 39 53

3 3 10 (et infer. cap. II 39 53⅔

3 4 25 39 53⅔

3 5 10 39 54

3 6 20 39 55

3 9 15 Inter Spicam III 52 5¾

3 10 15 et or. limb. (52 6

3 11 17 52 6½

3 12 25 52 7½

N. B. Hæc non respondent motui (.

Cum (in his distantijs obseruaretur erat bene serenum.

Circa medium tempus obseruationis fuit altitudo super. limbi (38 part.

Alt. autem Spicæ quando ab ea obseruabatur (fuit 23 partium.

3 18 30 Declin.

super. limbi (9 9¾ B.

Infer. limbi 8 37½

Diameter (0 32½

3 28 45 Decl.

sup. limbi (9 9½

Infer. limbi (8 35

Diam. (

apparens 0 34½

Postea obseruabatur (in distantia æquat. a Spica pro verificando horolog. In sequentibus non erat satis serenum.

Or. limb. Spica III Dist. Alt. sup.
(occ. or. æquat. limb. (

3 34 55 34 47½ 14 16 49 3⅛ 35⅝

3 38 33 35 42¼ 13 15 48 57¼

3 40 10 36 4½ 12 54½ 48 59

3 47 35 37 55¼ 10 57¾ 48 53 34 35

3 49 5 38 15½ 10 39¼ 48 54½ 34 20

3 50 45 38 43 10 9 48 52 34 10

3 53 25 Declin. super. limbi (9 4½

Inferioris 8 31

Diameter (apparens 0 33½

Proxime sequenti Meridie horologium saltem 35" iusto celerius mouebatur per 24 horas, unde tempora prius assignata satis bene se habent.

DIE 24 JANUARIJ.

6^h 38½^m A. M. Declin.

sup. cornu (18 59 Mer.

Inferioris 19 29½

0 30½

Alt. inf. cornu (12 30

Obseruabatur vbique orientalis
limbus (.

Per Arm. Altitudo Dist.
æquat. inter infer. Spicæ
(et Spicam limbi (a Merid.

6 45 64 50 12 35 43 27

6 52¾ 64 52 12 50 45 25

Pone itaque quod tunc cum Spica distabat a Meridiano versus occ. 43 Gr. 27 M. fuerit Distant. æquat. orient. limbi (a Spica 64 49½ & cum Spica abesset P. 45 25 M. pone 64.53

6 59 Decl. infer. limbi 19 29 Altit. infer. Limbi ☾
7 0 super. limbi ☾ 18 57½ 13 10

DIE 5 FEBRUARIJ.

Ad Vesperas.

6 28 10 tranſiuit occid. limbus ☾
per Merid. et habuit
alt. ſup. cornu 49 22½
Inferius cornu 48 50
Diameter ☾ 0 32½
6 32½ Declin.
ſuper. cornu ☾ 15 20
Inferioris cornu ☾ 14 47
Diameter ☾ 0 33

| | Occid. limb. ☾ occ. | Aldebor. or. | Diſt. æquat. | Altit. ſuper. cornu |
|-------|---------------------------|--------------------------|-----------------|---------------------------|
| 6 45 | 4 25 | 4 7½ | 8 32½ | 49 20 |
| | | pone 8 33 | | |
| 6 46 | 4 52 | 3 39½ | 8 31½ | 49 15 |
| | | pone 8 32 | | |
| 6 51½ | 5 59½ | 2 30½ | 8 30 | 49 0 |
| | | melior priore, pone 8 29 | | |
| 6 53½ | 6 22½ | 2 5 | 8 27½ | 48 ½ |
| | | pone hic 8 28 | | |

Hæc veniunt aliquo modo limi-
tanda, ita vt vltima obſervatione po-
natur 8 28, deinde 8 29.

6^H56½ Declin.
ſuper. limbi ☾ 15 20 B.
Infer. limbi 14 48
Diameter appar. 0 32
7 2½ Tranſiuit Aldeb. per Merid.
quando Luc. √ fuit verſus oc-
calum 37 9½
habuitque
altitudinem 49 42

Nota. Horologium multis diebus
non erat correctum, itaque tempora
ſunt e tranſitu Aldebor. corrigenda.

Examinatio Loci ☾

DIE 9 JANUARIJ.

7^H 4' Diſt. æquat.
occ. limbi ☾ a luc. √ 33 31
adde 17
Differ. Aſc. R. centri ☾ 33 48

7 2 ☾ exacte in 90 gradu,
tunc locus in 1 0 II
Aſcenſ. R. Luc. √ 26 1½
Aſcenſ. R. centri ☾ 59 49½
Declin. centri ☾ 16 2 B.
Reſp. Longitudo 1 0 36 II
Latitudo 4 29 15 M.
7 21 Inter occid. limb. ☾
et luc. √ 32 15½
Adde ſemid. 16
Diſtancia centri 32 31½
Declin. centri 16 4 B.
Declin. Luc. √ 21 28½
Aſc. R. ☾ 59 58
Reſp. Longitudo 1 9 2 II
Latitudo 4 28 59 M.

DIE 14 JANUARIJ.

13 40 Diſt. inter or. limb.
☾ & 4 33 59½
ſubtr. 16½
Diſt. centri ☾ 33 43½
Decl. centri ☾ 12 44 B.
Declinatio 4 23 27 B.
H. 8 fuit Aſcenſ. R. 4 97 58 20
ſubtrahe 1 0
13 39 Aſc. R. 4 97 57 20
Differ. Aſcenſ. ☾ 33 45 16
Aſcenſ. R. ☾ 131 42 36
13 55 Inter or. limb. ☾
et cor ☾ 14 9
Adde 16
Diſtancia Centri 14 25
Declin. centri 12 41 B.
Declin. cordis ☾ 13 57½ B.
13 37 Pone Aſcenſ. R.
centri ☾ 131 41 40
Declin. ☾ Bor. 12 44 30
Reſp. Longitudo 10 39 0 ☾
Latitudo 5 3 57 M.
13 39 ☾ in 90. Locus ☾ 10 40 ☾

DIE 16 JANUARIJ.

15 2 Inter or. limb. ☾
et inf. cap. II 39 53
ſubtrahe 16
Diſtancia centri 39 37
Declinatio centri 8 57 B.
Declinat. cap. II 28 56 40

| | | | | | |
|----|---|-------------------------------|----|------------------|----|
| 15 | 9 | Inter Spicam \mathbb{M} | | | |
| | | et or. limbum ζ | 52 | 5 | 45 |
| | | adde | 16 | 15 | |
| | | Distantia centri ζ | 52 | 22 | |
| | | Declinatio centri ζ | 8 | 55 | B. |
| | | Declinatio Spicæ \mathbb{M} | 8 | 57 $\frac{1}{6}$ | M. |
| | | Pone H. 15 M. 0 | | | |

Afc. R. centri ζ 146 24

15 4 ζ in 90 Gradu. Locus ζ

| | | | | | |
|----|-----------|---------|-----------|-------|-----------|
| 25 | Gr. 37 M. | ζ | Resp. | | |
| | 2 | | Longitudo | 25 37 | 5 ζ |
| 25 | 39 | ζ | Latitudo | 4 19 | 42 M. |

DIE 2 MARTIJ P. M.

H. 8 M. 32 P. M. ζ admodum prope applicans \mathfrak{h} juxta superius cornu, quod fere eandem cum eo obtinere latitudinem visa est, distabat per Radium 32 M. eratque tunc Altit. inferioris limbi ζ 5 Gr. 40 M. Linea vero a mediale siue Lucida Pleiadum per \mathfrak{h} medium quasi corporis lunaris vna transibat.

| | | | |
|---|-----------------|---------------|-------------------------|
| 9 | 2 | Eadem dist. | Alt. inf. limb. ζ |
| | | per Rad. 0 31 | 3 0 |
| 9 | 5 $\frac{1}{2}$ | 0 28 | 2 15 |

Linea recta per Medium ζ in \mathfrak{h} quasi in Capellam ibat.

DIE 3 MARTIJ P. M.

| | | |
|--------------------------------|------------------------------|---------------------|
| 5 ^H 56 ^M | Declin. super. cornu ζ | 11 52 B. |
| 5 57 | Decl. infer. limbi | 11 27 $\frac{1}{2}$ |
| | Diameter | 0 24 $\frac{1}{2}$ |
| 5 58 $\frac{1}{2}$ | Repetita declin. super. 11 | 54 |
| 5 59 | infer. limbi | 11 26 $\frac{1}{2}$ |
| | Diameter | 0 28 |
| | Declinatio centri ζ | 11 40 |

Hæc sequentia Azimuta numerantur a Merid. ad occasum vt prius in \odot^{le} .

| | | | | |
|---|---|----|-----------------------------|-------|
| 6 | 8 | 14 | Azim. occid. limbi ζ | 57 18 |
| | | | Altit. infer. limbi ζ | 33 26 |

subito capta, cum ferrum superius, quod quadrantem fulcit, minus impediret, non tamen omnino id ipsum prætergreßa erat.

| | | | |
|--------------------|-----|----------------------------|-----------------------------|
| | | Azim. occid. limbi ζ | Altit. infer. limbi ζ |
| 6 ^H 13' | 3'' | 58 30 | 32 52 $\frac{3}{4}$ |
| 6 15 | 4 | 59 0 | 32 39 $\frac{3}{4}$ |
| 6 17 | 0 | 59 30 | 32 20 |
| 6 18 | 27 | Decl. super. limbi ζ | 11 57 |
| 6 19 | 7 | Inferioris limbi ζ | 11 28 $\frac{1}{4}$ B. |
| | | Diameter ζ | 0 28 $\frac{3}{4}$ |

| | | | |
|---|----|--------------------------|-----------------------------|
| | | Azim. occ. limbi ζ | Altit. infer. limbi ζ |
| 6 | 23 | 0 | 31 42 $\frac{2}{3}$ |
| 6 | 25 | 15 | 31 26 |
| 6 | 27 | 13 | 31 12 |
| 6 | 29 | 10 | 30 58 $\frac{1}{2}$ |

| | | | | |
|---|----|----|---------------------------------|---------------------|
| 6 | 30 | 35 | Declinatio super. limbi ζ | 11 58 $\frac{1}{2}$ |
| | | | infer. 11 | 28 $\frac{1}{2}$ |
| 6 | 31 | 0 | | 11 57 $\frac{3}{4}$ |
| 6 | 33 | 34 | Repet. super. | |

DIE 4 MARTIJ.

| | | |
|--------------------|----------------------------|----------|
| 8 ^H 24' | Decl. super. cornu ζ | 14 40 B. |
| | inferioris | 14 9 |
| | Diameter | 0 31 |
| | Alt. infer. limbi | 24 30 |

| | | | |
|---|------------------|---------------------------------|---------------------------|
| 8 | 29 $\frac{1}{2}$ | Inter occ. limb. ζ | Alt. infer. limbi ζ |
| | | & Aldeb. 11 12 $\frac{1}{2}$ | 23 35 |
| 8 | 30 $\frac{2}{3}$ | 11 11 $\frac{3}{4}$ | 23 20 |
| 8 | 31 $\frac{1}{2}$ | 11 11 $\frac{1}{4}$ | 22 58 |
| 8 | 32 $\frac{1}{6}$ | 11 10 $\frac{3}{4}$ | 22 49 |
| 8 | 35 $\frac{2}{3}$ | Decl. sup. limbi 14 41 B. | 22 20 |
| 8 | 36 $\frac{3}{4}$ | Infer. limbi 14 9 $\frac{1}{2}$ | |
| | | Diam. app. 0 31 $\frac{1}{2}$ | |

DIE 5 MARTIJ P. M.

Obseruatio ζ cum proxime eßet iuxta Aldeboram, iam iam eam itellam prætergreßa et parum ea Borealior exiitens.

| | | | |
|--------------------|-----|------------------------|------------------------------|
| 6 ^H 15' | 1'' | Aldeb. occid. a Merid. | 26 34 $\frac{1}{4}$ |
| 16 | 1 | Occid. limbus ζ | a Merid. 26 57 $\frac{1}{2}$ |
| | | per Armillas maximas. | |

Videbatur tunc Luna per Radium superior Aldeb. q. 15 Minutis quoad limbum inferiorem, et prætergreßa mediam coniunctionem cum Alde-

bora quasi $\frac{1}{5}$ vnus gradus ad vifum.
Sed nota, hic & in fequentibus obferuationi per Radium non nimis fidentum.

6 24 14 Aldeb. a Merid.
per Arm. 28 54 $\frac{1}{4}$

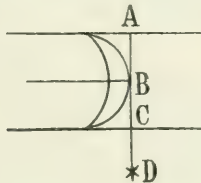
6 25 0 \angle limbus occid.
a Mer. 29 12

6 34 25 Aldeb.& occid. limbus \angle erant
in æquali remotione a Meridiano
quo ad polos Mundi per Arm. 31 32 $\frac{1}{2}$
fuitque tunc Azim. occ. limbi \angle 44 40
Infer. vero limbi \angle Altitud. 43 42

Per Armillas mai. fubterranean.

6 36 57 Declin. infer. limbi \angle 15 56
superioris limbi \angle 16 27 $\frac{1}{4}$
0 31 $\frac{1}{4}$

6 39 25 Declin. Aldeb. Bor. 15 36 $\frac{1}{4}$



6 42 $\frac{1}{2}$ BD distantia Aldeb. a
medio occid. limbi 0 31

6 44 $\frac{1}{2}$ Eadem distantia 0 29 $\frac{1}{2}$

6 47 $\frac{5}{8}$ AD distantia Aldeb.
a fup. Limb. 0 50

6 50 CD Aldeb. ab infer.
Limbo \angle 0 15

6 52 $\frac{1}{2}$ Eadem CD et melior 0 16

Per Radium, itaque his, vt dixi, non
nimium fidendum, fed potius declinationi.

DIE 9 MARTIJ P. M.

8^H 48' \angle in 90 gradu iuxta fupput.

7 54 tranfuit \angle occ. limb. Merid. &
hauit cornu alt.

| | Superius | Inferius |
|--------------|---------------------|---------------------|
| Per volubil. | 49 52 $\frac{1}{4}$ | 49 19 |
| Per Mural. | 49 51 | 49 18 $\frac{1}{2}$ |

| | Decl. fuper. cornu \angle | Inferi- oris | Dia- meter |
|--------------------|--------------------------------|--------------------|--------------------|
| 8 7 | 15 43 | 15 9 | 0 34 |
| 8 11 | 15 41 | 15 9 | 0 32 |
| 8 13 $\frac{1}{2}$ | 15 42 $\frac{3}{4}$ | 15 8 $\frac{3}{4}$ | 0 34 |
| 8 17 | 15 41 $\frac{1}{4}$ | 15 9 $\frac{1}{2}$ | 0 31 $\frac{3}{4}$ |

Prouenit declinatio 15 25.

Horolog. verificabatur primum ab
oculo \angle ad horam 8 $\frac{1}{2}$ exacte.

Sequitur obferuatio \angle iuxta 90 gradum.

| | Aldeb. occ. | Occ. limb. \angle occ. | Dift. æquat. |
|--------------------|---------------------|-----------------------------|---------------------|
| 8 32 $\frac{1}{6}$ | 64 6 | 10 27 $\frac{1}{2}$ | 53 38 $\frac{1}{2}$ |
| 8 34 $\frac{1}{4}$ | 64 36 $\frac{1}{2}$ | 10 56 $\frac{1}{6}$ | 53 40 $\frac{5}{6}$ |
| 8 37 5" | 65 19 $\frac{1}{2}$ | 11 36 $\frac{1}{2}$ | 53 43 |
| 8 38 $\frac{1}{6}$ | 65 36 $\frac{1}{2}$ | 11 52 $\frac{3}{4}$ | 53 43 $\frac{3}{4}$ |
| 8 40 $\frac{3}{4}$ | 66 19 $\frac{1}{2}$ | 12 36 | 53 43 $\frac{1}{2}$ |
| 8 43 | 66 50 | 13 2 | 53 48 } dubiæ |
| 8 44 $\frac{1}{2}$ | 67 11 | 13 25 | 53 46 } melior |
| 8 48 $\frac{1}{2}$ | 68 14 | 14 25 | 53 49 } bona |

Tunc erat \angle in ipfo 90 gradu.

8 50 $\frac{3}{4}$ Repetita declin.

fuper. cornu \angle 15 39

Inferioris cornu \angle 15 6 $\frac{1}{2}$

Diameter apparens \angle 0 32 $\frac{1}{2}$

Ergo vera declinatio
centri \angle 15 23

Postea obferuabatur \angle vice verfa
a corde \angle vt fequitur.

| | Cor \angle or. | \angle occid. | Dift. æquat. |
|--------------------|---------------------|---------------------|--|
| 8 54 | 13 56 $\frac{1}{2}$ | 15 38 $\frac{1}{4}$ | 29 34 $\frac{3}{4}$ |
| 8 56 $\frac{1}{3}$ | 13 21 | 16 10 $\frac{1}{4}$ | 29 31 $\frac{1}{4}$ } dubia |
| 8 57 $\frac{1}{2}$ | 13 4 $\frac{1}{2}$ | 16 27 | 29 31 $\frac{1}{2}$ } melior |
| 8 58 $\frac{3}{4}$ | 12 46 | 16 47 | 29 33 |
| 9 1 | 12 10 $\frac{1}{2}$ | 17 21 $\frac{3}{8}$ | 29 32 $\frac{1}{6}$ } melior |
| 9 5 $\frac{1}{5}$ | 11 8 | 18 23 | 29 31 } et clarior |
| 9 7 | 10 43 | 18 44 $\frac{1}{4}$ | 29 27 $\frac{1}{4}$ } dubia |
| 9 8 $\frac{1}{2}$ | 10 22 $\frac{1}{6}$ | 19 6 $\frac{1}{2}$ | 29 28 $\frac{2}{3}$ } melior & ferenior |

| | Declin. fuper. cornu \angle | Inferi- oris | Diameter apparens | Declin. centri |
|--------------------|-------------------------------------|--------------------|----------------------|-------------------|
| 9 10 | 15 36 $\frac{1}{2}$ | | | |
| 9 11 | . . . | 15 3 $\frac{1}{2}$ | 0 33 | 15 20 |
| 9 15 $\frac{1}{2}$ | 15 35 $\frac{1}{3}$ | 15 3 | 0 32 $\frac{1}{3}$ | 15 19 |

DIE 10 MARTIJ.

2^H 29¹/₃ P. M. Declinatio
super. limbi ☾ 13 45 B.
Inferioris 13 16¹/₂
Alt. infer. limbi 10 18

| | Diff. æquat. occ. limbi ☾ et centri ☉ | Alt. ☉ | Alt. inf. limbi ☾ |
|----------------------------------|---|------------------|-----------------------|
| 2 48 30 | 128 25 ¹ / ₆ | 24 24 | 12 51 |
| 2 54 0 | 128 30 | 23 50 | 13 33 |
| 2 56 2 | 128 31 | 23 30 | 13 50 |
| 2 57 30 | 128 32 | 23 25 | 14 5 |
| 2 58 55 | 128 32 | 23 20 | 14 16 |
| 3 0 10 | 128 33 | 23 10 | 14 23 |
| 3 2 0 | 128 34 | 23 2 | 14 36 |
| 3 4 0 | 128 34 ³ / ₄ | 22 50 | 14 52 |
| 3 5 50 | Declinatio sup. limbi ☾ 13 40 ³ / ₄ Inferioris 13 11 ¹ / ₂ B Diameter 29 ¹ / ₄ | 15 8 | |
| | Diff. æquat. | Alt. ☉ | |
| 3 13 ¹ / ₃ | 128 39 ¹ / ₂ | 21 40 | 16 10 |
| 3 15 45 | 128 41 | 21 30 | 16 29 |
| 3 17 15 | 128 42 ³ / ₄ | 21 20 | 16 42 |
| 3 19 20 | 128 43 ¹ / ₄ | 21 5 | 16 51 |
| 3 21 5 | 128 44 | 20 50 | 17 8 |
| 3 23 | Decl. sup. cornu 13 40 B Inferioris 13 10 | 17 26 | |
| 3 25 | Decl. repet. sup. 13 39 ¹ / ₂ Inferioris 13 9 ³ / ₄ | 17 40 | |
| | Diff. æquat. | Alt. ☉ | Alt. infer. lim. ☾ |
| 3 33 45 | 128 49 ¹ / ₄ | 19 18 | 18 53 |
| 3 35 40 | 128 50 | 19 5 | 19 8 |
| 3 37 15 | 128 52 | 18 50 | 19 24 |
| 3 38 35 | 128 52 ¹ / ₂ | 18 40 | 19 33 |
| 3 40 30 | 128 53 ¹ / ₂ | 18 30 | 19 46 |
| 3 42 | Declinatio sup. limbi ☾ 13 37 ¹ / ₂ Infer. 13 7 B | 20 0 | |
| 6 29 ¹ / ₂ | Declin. sup. cornu 13 21 Inferioris cornu 12 50 | Diameter 0 31 | |

¹ Linea inducta. E codice V.

| | Occid. limb. ☾ or. | ☿ occid. | Diff. æquat. æquat. |
|----------------------------------|-----------------------------------|----------------------------------|-----------------------------------|
| 6 34 | 31 19 ¹ / ₄ | 2 2 ¹ / ₄ | 33 21 ¹ / ₂ |
| 6 35 ¹ / ₆ | 30 58 ³ / ₄ | 2 23 ¹ / ₆ | 33 22 |
| 6 36 ¹ / ₂ | 30 40 ¹ / ₂ | 2 41 ¹ / ₂ | 33 22 |
| 6 38 ² / ₃ | 30 7 | 3 16 ¹ / ₃ | 33 23 ¹ / ₃ |

Alt. ☾ iuxta has obseruationes fuit quasi G. 40.

6 40¹/₃ Declinatio super.
cornu ☾ 13 20¹/₂
Inferioris 12 49⁵/₆
30²/₃
Alt. super. cornu ☾ in
Merid., per Q. Tychon. 47 12¹/₂
Inferioris 46 40
Postea obseruabatur ☾ appropinquans 90 gradui.

9 54 Declinatio
super. cornu ☾ 12 57
Infer. cornu ☾ 12 24³/₄
Diameter ☾ 32¹/₄
Alt. infer. limbi ☾
tunc erat 44 32
44 17

| | Infer. cap. ☿ occ. | ☾ occ. Limb. occ. | Diff. æquat. æquatoria |
|-----------------------------------|--|-----------------------------------|-----------------------------------|
| 9 59 ¹ / ₂ | 40 17 ³ / ₄ | 19 0 | 21 17 ³ / ₄ |
| | | Pone | 21 17 |
| 10 1 ¹ / ₂ | 40 37 | 19 18 | 21 19 |
| 10 2 ¹ / ₆ | 40 56 | 19 36 | 21 20 |
| 10 3 ¹ / ₃ | 41 3 | 19 44 ¹ / ₂ | 21 18 ¹ / ₂ |
| 10 5 | 41 37 ¹ / ₂ | 20 18 | 21 19 ¹ / ₂ |
| | Cor. ☿ occ. | Pone | 21 20 |
| 10 8 | 5 52 | 21 1 ¹ / ₂ | 15 9 ¹ / ₂ |
| 10 10 | 6 17 ¹ / ₂ | 21 28 | 15 10 ¹ / ₂ |
| 10 12 ¹ / ₃ | 6 55 | 22 3 ¹ / ₃ | 15 8 ¹ / ₃ |
| 10 14 ¹ / ₃ | 7 24 | 22 32 | 15 8 |
| 10 16 ¹ / ₂ | Declinatio super. cornu ☾ 12 54 Inferioris cornu ☾ 12 21 ¹ / ₂ Diameter apparens 32 ¹ / ₂ | | |

Hora 10¹/₆ ☾ circa 90 gradum, Longitudo 10 G. 35³/₈ ☿, Latitudo 5 G. 10' 58" Mer.

DIE 10 MARTIJⁱ

Luna circa 90 gr. H. 10¹/₆.

H. 10 M. $7\frac{3}{4}$ Dist. centri ☾ ab
 inf. cap. ☿ $21^{\circ}35\frac{1}{2}'$
 aßumendo semid. 16^m
 Asc. R. inf. cap. ☿ $109\ 59\ 10''$
 Ergo Asc. R. ☾ $131\ 34\ 40$
 Declin. centri ☾ $12\ 39\ B.$

H. 10 M. $12\frac{3}{4}$ Dist. centri ☾
 a corde ☿ $14^{\circ}54'\ 30''$
 Asc. R. Cordis ☿ $146\ 33\ 50$
 Ergo Asc. R. ☾ $131\ 39\ 20$

H. 10 M. 10 Asc. R. ☾
 limitata $131^{\circ}37'\ 0''$
 Declin. centri ☾ $12\ 39\ B.$
 Resp. Longitudo $10\ 35\frac{3}{4}\ \odot$
 Latitudo $5\ 10\ 58^m.$

DIE 11 MARTIJ, MANE.

$3^h56\frac{1}{2}'$ ☾ distabat a corde ☿ per occi-
 dentalem limbum $11\ 51\frac{1}{2}$

3 58 Declin.
 super. Limbi ☾ $12\ 15\frac{1}{2}$
 4 1 Inferioris $11\ 50$

Altitudo ☾ circa id tempus quasi 2 G.

*Hæc obseruatio in ☾ est mediocris
 ob parallaxin eius indagandam, sed
 habenda ratio refractionis eius.*

H. 4 M. 4 accipiebatur declin. cordis
 ☿ $14\ 1\frac{1}{2}$, fuit tunc altitudo cordis leonis
 9 G. quasi.

*Hæc declin. accipiebatur vt refractionis
 cordis ☿ in declinatione quo ad
 decliuorem situm explicaretur.*

DIE 12 MARTIJ.

$9^h26'$ P. M. Declin. infer $Alt. inf.$
 Limb. ☾ $4\ 53\ B.$ $limb. \odot$
 Superioris $5\ 25$
 $0\ 32$

| | Occ. limbus ☾ orient. | Cor ☿ or. | Dist. æquat. | |
|----------|--------------------------|--------------------|---------------------|-------|
| 9 29 20" | 15 45 $\frac{1}{2}$ | 3 7 $\frac{3}{4}$ | 12 37 $\frac{3}{4}$ | 37 30 |
| 9 32 40 | 14 55 $\frac{1}{4}$ | 2 15 $\frac{1}{2}$ | 12 39 $\frac{3}{4}$ | 38 0 |

Cor ☿ viterius non conspiciebatur
 propter nubes.

9 37 Declin.
 super. limb. 5 $21\frac{3}{4}$ Bor.
 Inferioris
 limb. 4 $51\frac{1}{2}$
 Diameter ☾ $30\frac{1}{4}$ } Inter
 nubes
 denfi-
 ores

DIE 13 MARTIJ.

$11^h28'\ 13''$ tranſiuit occid. limbus ☾ per
 Meridianum, & habuit ſupe-
 rior limbus altit. $34\ 30$
 Inf. limb. $33\ 56$
 Tunc fuit Spica or. $21\ 20$

DIE 14 MARTIJ, A. M.

2 17 ☾ in 90 gradu ab Ascend. ſup-
 putabatur.

1 45 Declinatio
 super. limbi ☾ $0\ 0$
 Inferioris $0\ 34\ Au.$

| | Cor. ☿ occ. | Occ. limbus ☾ occ. | Distancia æquatoria |
|---------|---------------------|-----------------------|------------------------|
| 1 52 0 | 64 6 | 35 8 $\frac{1}{4}$ | 28 57 $\frac{3}{4}$ |
| 1 54 15 | 64 36 | 35 36 | 29 0 |
| 1 55 55 | 65 3 | 36 0 $\frac{1}{2}$ | 29 2 $\frac{1}{2}$ |
| 1 57 10 | 65 20 $\frac{1}{2}$ | 36 18 | 29 2 $\frac{1}{2}$ |

Alt. ſup. limbi ☾ $26\frac{3}{4}$
 2 $7\frac{1}{2}$ 67 55 38 49 $\frac{1}{4}$ 29 5 $\frac{3}{4}$
 2 9 68 21 $\frac{1}{2}$ 39 16 29 5 $\frac{1}{2}$
 2 10 35 68 44 $\frac{1}{2}$ 39 36 29 8 $\frac{1}{2}$
 2 11 55 69 3 39 54 29 9
 2 13 Declin.

super. limbi ☾ auf. $0\ 8$
 Inferioris limbi $0\ 40$
 Diameter $0\ 32$

| | Occ. limbus ☾ occ. | Spica ☿ occ. | |
|---------|-----------------------|-----------------|--------------------|
| 2 15 15 | 40 38 $\frac{3}{4}$ | 20 31 | 20 7 $\frac{3}{4}$ |
| 2 16 50 | 41 2 $\frac{3}{4}$ | 20 56 | 20 6 $\frac{3}{4}$ |
| 2 20 | 41 46 $\frac{1}{2}$ | 21 40 | 20 6 $\frac{1}{2}$ |

2 21 30 42 9 $\frac{3}{4}$ 22 4 $\frac{1}{2}$ 20 5 $\frac{1}{4}$
 2 23 5 42 31 $\frac{1}{2}$ 22 28 20 3 $\frac{1}{2}$
 2 24 20 42 52 22 49 20 3
 2 23 5 Alt. ſup. limb. ☾ $24\frac{1}{3}$

2 27 Repetita declin.
 ſup. limbi ☾ $0\ 10\ au.$
 Inferioris limbi ☾ $0\ 42\frac{1}{2}$
 Hora $2\frac{1}{4}$ Longitudo ☾ $26\ 30\frac{1}{2}\ \text{mp}$
 Latitudo $1\ 57\frac{1}{2}\ M.$

DIE 14 MARTIJ¹.

| | |
|--|------------------------------|
| H. 2 M. 12 Asc. R. ☾ | |
| a corde ☾ | 175° 58' 45'' |
| H. 2 M. 15 Asc. R. ☾ | |
| a Spica ♄ | 176 1 25 |
| H. 2 $\frac{1}{2}$ pone Asc. R. ☾ | 176 1 |
| Arcus inclinat. 7 $\frac{1}{2}$ sublt. | |
| Declinatio | 0 24 0 M. |
| Resp. Longitudo | 26 30 $\frac{1}{2}$ ♄ |
| Latitudo | 1 57 $\frac{1}{3}$ M. |
| Æquat. temp. nulla est. | |
| Simpl. motus ex Tab. Prut. | |
| Longitudinis | 2 ^{rex} 58° 31' 0'' |
| Anomalía | 2 31 25 16 |
| Noſter ſimplex ☉ ^{lis} | 0 0 53 7 |

DIE 1 APRILIS.

1^H32' P. M. ☾ in 90 gradu ab aſcendente ſupputabatur

| | |
|-----------------|----------|
| 1 13 Declinatio | |
| ſuper. cornu ☾ | 15 34 B. |
| Infer. cornu ☾ | 15 9 |
| Diam. app. | 0 25 |

| | |
|--------------------|-------|
| 1 16 Repetita decl | |
| ſuperioris | 15 34 |
| Inferioris | 15 10 |
| Diam. app. | 0 24 |

| | ☉ | Occ. limb. | ☾ or. | Dift. æquat. | |
|-----------------|---------------------|--------------------------|-------------------------|--------------|--|
| | occid. | | | | |
| 1 19 40 | 19 50 | 18 10 | 38 0 | | |
| 1 22 32 | 20 34 $\frac{1}{4}$ | 17 29 $\frac{1}{2}$ | 38 3 $\frac{3}{4}$ | | |
| 1 24 20 | 21 2 $\frac{1}{4}$ | 17 0 | 38 2 $\frac{1}{4}$ | | |
| 1 26 10 | 21 28 $\frac{1}{4}$ | 16 35 | 38 3 $\frac{1}{4}$ | | |
| 1 28 12 | 21 51 $\frac{1}{2}$ | 16 16 $\frac{1}{2}$ | 38 8 | | |
| 1 30 50 | 22 38 $\frac{1}{3}$ | 15 33 $\frac{1}{2}$ | 38 11 $\frac{1}{3}$ | } du- biæ | |
| 1 32 42 | 23 8 | 15 1 | 38 9 | | |
| 1 34 40 | 23 36 $\frac{1}{4}$ | 14 30 | 38 6 $\frac{1}{4}$ | | |
| 1 36 5 | 23 58 | 14 9 $\frac{1}{2}$ | 38 7 $\frac{1}{2}$ | | |
| 1 37 15 | 24 15 | 13 52 $\frac{1}{2}$ | 38 7 $\frac{1}{2}$ | | |
| 1 39 Declinatio | | | | | |
| ſuper. cornu ☾ | | 15 36 | | | |
| Inferioris | | 15 10 $\frac{1}{2}$ Bor. | | | |
| | | 0 25 $\frac{2}{3}$ | | | |
| 1 41 58 | 25 26 $\frac{3}{4}$ | 12 40 $\frac{3}{4}$ | 38 7 $\frac{1}{2}$ du- | | |
| 1 43 45 | 25 53 $\frac{3}{4}$ | 12 16 $\frac{1}{2}$ | 38 10 $\frac{1}{4}$ bia | | |
| 1 45 20 | 26 18 $\frac{1}{4}$ | 11 52 $\frac{3}{4}$ | 38 11 | | |
| 1 46 50 | 26 38 $\frac{1}{2}$ | 11 32 | 38 10 $\frac{1}{2}$ | | |
| 1 47 40 | 26 52 $\frac{3}{4}$ | 11 19 | 38 11 $\frac{3}{4}$ | | |
| 1 48 30 | 27 9 | 11 4 $\frac{1}{2}$ | 38 13 $\frac{1}{2}$ | | |

1 51 Declin.

| | |
|---------------------|---------------------|
| ſuper. cornu ☾ | 15 36 |
| Inferioris cornu ☾ | 15 10 $\frac{1}{2}$ |
| Diameter ☾ apparens | 0 25 $\frac{1}{2}$ |

| | |
|---|-------|
| 2 33 $\frac{1}{2}$ Tranſiit occid. limbus ☾ per | |
| Merid. Altitud. ſuper. cornu | |
| per Q. volub. | 49 46 |
| Inferioris cornu | 49 21 |
| | 0 25 |

Die eodem velperi

| | Inter occ. limb. | Altit. infer. |
|-----------------------------------|------------------|---------------|
| | ☾ et Aldeb. | cornu ☾ |
| 8 ^H 44 $\frac{1}{2}$ ' | 2 29 45 | 12 43 |
| 8 45 $\frac{1}{4}$ | 2 28 40 | 12 24 |
| 8 47 $\frac{1}{4}$ | 2 27 30 | 12 7 |

Hinc collatione facta cum ea obſervatione quæ fiebat apud 90 gradum, poteſt fieri periculum de ☾ parallaxi. Oportet autem conſiderare quod fuerint fere in eadem latitudine viſa Aldeboram & ☾.

DIE 5 APRILIS.

6^H33' P. M. in 90 gradu juxta computationem.

| | |
|---|---------------------|
| 6 30 $\frac{1}{2}$ Decl. ſuper. cornu ☾ | 16 28 $\frac{1}{2}$ |
| 6 31 $\frac{1}{6}$ Infer. cornu ☾ | 15 59 |
| Diam. ☾ app. | 0 29 $\frac{1}{2}$ |

| | Dift. æquat. inter | Altitudo |
|--------------------|---------------------|----------|
| | occid. limb. ☾ et ☉ | ☉ |
| 6 35 $\frac{1}{3}$ | 87 47 | 3 0 |
| 6 37 $\frac{1}{2}$ | 87 47 | 2 40 |
| 6 39 $\frac{1}{3}$ | 87 47 $\frac{2}{3}$ | 2 20 |
| 6 41 $\frac{1}{3}$ | 87 46 $\frac{1}{2}$ | 2 10 |
| 6 44 | 87 48 $\frac{1}{4}$ | 2 5 |
| 6 45 | 87 49 $\frac{1}{2}$ | 1 55 |

| | |
|----------------------------------|------------------------|
| 6 46 Declinatio | |
| ſuper. cornu ☾ | 16 27 |
| Infer. cornu ☾ | 15 58 |
| Diameter apparens | 0 29 |
| 7 3 $\frac{1}{3}$ Repetita decl. | |
| ſuper. cornu | 16 26 $\frac{1}{4}$ B. |
| Inferioris | 15 55 $\frac{1}{2}$ |

| | ☿ occid. | Occ. limb. | Dift. æquat. |
|--------|--------------------|---------------------|---------------------|
| | | ☾ occ. | |
| 7 6 0 | 31 31 | 19 12 | 12 19 |
| 7 7 10 | 31 50 | 19 30 $\frac{1}{2}$ | 12 19 $\frac{1}{2}$ |
| 7 8 10 | 32 6 $\frac{1}{2}$ | 19 47 | 12 19 $\frac{1}{2}$ |

Trabs fixa nonnihil impedimento fuit.

¹ E codice V.

² Codex habet 6 $\frac{1}{4}$.

³ Codex habet 9 $\frac{1}{4}$.

| | |
|----------------------------|---------------------|
| 7 10 $\frac{1}{2}$ Declin. | |
| super. cornu ζ | 16 25 $\frac{1}{2}$ |
| Inferioris cornu | 15 55 $\frac{1}{2}$ |
| | 0 30 |

Per Sext. Δ .

| | |
|---|---------------------|
| 7 15 $\frac{1}{2}$ Inter occid. limb. ζ | 13 43 $\frac{1}{2}$ |
| 7 16 $\frac{1}{3}$ et η ipsi proxim. | 13 43 $\frac{3}{4}$ |
| 7 17 | 13 44 |
| 7 17 $\frac{1}{2}$ | 13 44 |
| 7 20 Repetita declin. | |
| super. cornu | 16 25 |
| Inferioris | 15 53 $\frac{1}{2}$ |
| | 0 31 $\frac{1}{2}$ |

Nota. Erat ζ in maxima remotione
vtriusque Epicycli.

Pro latit. et parallaxi ζ .

| | |
|---|---------------|
| 6 ^H 34 ^M Declinatio ζ | 16 13 |
| Longitudo vera | 20 40 \odot |
| Altitudo vera | 48 45 |
| Latitudo obseruata | 5 45 |
| Distantia a \odot | 13 26 |
| Resp. Latitudo | 5 6 |
| Pone Maximam in \square sic 16 | |
| Parallaxis in Altitudine | 0 39 |

Quæ subducta ab obseruata Latit., re-
linquit veram 5 6, quæ cum calculo
conuenit.

Hæc ἐν πλάτει ad demonstranda ea
quæ admonitioni Libri 2 progymnas.
de ζ inserta sunt iuxta \square ut plurimum
obseruata esse, atque ideo conuenire
cum ea Latitudine maxima quæ po-
stea iisdem locis peruestigata est¹.

DIE 5 APRILIS².

| | | |
|------------------------|----------------------|----------------------------|
| H. 7 M. 20 | Dist. occ. limbi | |
| | ζ a η | 13° 43' 40'' |
| BA 74 50 $\frac{1}{2}$ | Semid. ζ add. | 15 0 |
| CA 66 30 | Dist. centri | 13 58 40 |
| BC 13 58 40 | Declin. | |
| BAC 12 40 | centri ζ | 16 9 $\frac{1}{2}$ |
| | Declin. η | 23 30 B. |
| | Ergo Asc. R. ζ | 111 48 0 |
| | Resp. Longit. | 21 0 $\frac{3}{8}$ \odot |

¹ Cf. T. IV p. 43 (De mundi æth. rec. phæn. p. 40).

² E codice V.

DIE 6 APRILIS P. M.

Obseruatio ζ 90 gradui
appropinquantis.

| | |
|---|---------------------|
| 7 ^H 34' Declin. super. cornu ζ | 14 19 B. |
| Inferioris | 13 47 |
| | 0 32 |
| 7 36 Repetita declin. super. | 14 18 B. |
| Inferioris | 13 46 $\frac{1}{2}$ |
| | 0 31 $\frac{1}{2}$ |

| | η occid. | Occ. limb. (ζ occ.) | Dist. æquat. |
|---|---------------------|-------------------------------|---------------------|
| 7 40 $\frac{1}{2}$ | 39 27 | 13 40 $\frac{1}{2}$ | 25 46 $\frac{1}{2}$ |
| 7 41 50 | 39 46 | 14 0 | 25 46 |
| 7 43 | 40 3 $\frac{3}{8}$ | 14 16 | 25 47 $\frac{3}{8}$ |
| 7 44 10 | 40 20 $\frac{3}{4}$ | 14 33 | 25 47 $\frac{3}{4}$ |
| 7 45 35 | 40 42 $\frac{1}{2}$ | 14 54 | 25 48 $\frac{1}{2}$ |
| 7 47 $\frac{1}{2}$ Decl. super. cornu ζ | | 14 16 B. | |
| Inferioris cornu ζ | | 13 44 $\frac{1}{4}$ | |
| | | 0 31 $\frac{3}{4}$ | |

Per Sext. veterem

| | |
|---|------------------------|
| 7 50 $\frac{1}{3}$ Inter occid. limb. ζ | 26 9 $\frac{1}{6}$ |
| 7 51 et η | 26 10 |
| 7 51 $\frac{1}{2}$ | 26 10 $\frac{1}{2}$ |
| 7 52 | 26 11 |
| 7 53 | 26 11 $\frac{1}{2}$ |
| 7 54 $\frac{2}{3}$ Repetita decl. super. | 14 14 $\frac{1}{4}$ B. |
| Inferioris | 13 43 $\frac{1}{2}$ |
| | 0 30 $\frac{1}{4}$ |

| | η occid. | Occid. limb. (ζ occ.) | Dist. æquat. |
|--|------------------|---------------------------------|---------------------|
| 7 57 20 | 43 38 | 17 45 $\frac{1}{3}$ | 25 52 $\frac{2}{3}$ |
| 7 58 30 | 43 56 | 18 2 $\frac{1}{2}$ | 25 53 $\frac{1}{2}$ |
| 8 0 $\frac{1}{6}$ Declin. super. cornu ζ | | 14 13 $\frac{1}{4}$ B. | |
| Inferioris | | 13 43 | |
| Diameter ζ | | 0 30 $\frac{1}{4}$ | |

DIE 6 JULIJ.

10^H 0' P. M. ζ in 90 gradu supputaba-
tur.

| | |
|--|-------|
| 9 3 Declin. per Armillas Au. | |
| sup. limb. ζ | 18 22 |
| 9 3 $\frac{1}{2}$ Inferioris | 18 54 |
| Diameter appar. | 0 32 |
| 9 4 $\frac{1}{2}$ Transiit occid. lim- bus ζ per merid. | |
| Altit. super. cornu | 15 44 |
| per Volubil., Inferioris | 15 12 |

Altitudo per Tychon., sup. 15 44 $\frac{3}{4}$
inf. 15 13

DIE 4 AUGUSTI, P. M.

8^h 37' P. M. ☾ in 90 gradu ab ascen-
dente juxta supputationem.
8 58 $\frac{1}{2}$ Transiit occid. limb. ☾ Merid.
& habuit altitudinem per Volub.
superius cornu 15 20 $\frac{1}{2}$
Inferius 14 47 $\frac{1}{2}$
Diameter ☾ 0 33
Per Tychon., super. cornu 15 20
Inferius cornu 14 46 $\frac{1}{2}$
Diameter ☾ 0 33 $\frac{1}{2}$
9 1 Declin. super. limbi 18 47 $\frac{1}{2}$ Au.
Inferioris 19 20
Diameter ☾ app. 0 32 $\frac{1}{2}$

Per Sext. Δ

9 13 Dist. inter occ. limb. ☾ 36 57
9 14 et caput Ophiuchi 36 58
9 15 36 59 $\frac{1}{2}$
9 17 Inter occ. limb. ☾ et Os 50 15 $\frac{1}{2}$
9 18 Pegasi 50 15 $\frac{1}{4}$
9 20 50 15
9 21 50 14 $\frac{1}{2}$
9 24 Declin. super. limb. ☾ 18 46
Infer. Limbi 19 19

Tempora assignata sunt verificata.

DIE 5 AUGUSTI.

8^h 52' P. M. ☾ in 90 gradu ab Asc.

9 8 $\frac{1}{2}$ Declin. super. limbi ☾ 17 35 $\frac{1}{4}$ M.
9 9 $\frac{1}{4}$ Infer. Limbi ☾ 18 8 $\frac{3}{4}$
0 33

Per Sext. Vet.

9 18 5 Inter occ. limbum ☾ 45 15
9 19 10 et Caput Ophiuchi 45 15 $\frac{1}{2}$
9 20 20 45 15 $\frac{3}{8}$
9 25 15 Inter occ. limb. ☾ 38 8 $\frac{3}{4}$
9 28 45 et Os Pegasi 38 8
9 31 0 38 7 $\frac{1}{4}$
9 32 Declin. sup. limbi ☾ 17 34 $\frac{3}{4}$ A.
Inferioris 18 7 $\frac{3}{4}$
Diameter ☾ apparens 0 33
9 48 18 Transiit Luc. Vult.
per Mer., Alt. 41 58
9 49 1 Transiit ☾ occ. limb. per Me-
rid. Alt. per volub. sup. limbi
16 32 $\frac{1}{2}$
Inferioris limbi 16 2
Diameter 0 30 $\frac{1}{2}$
per Q. Tychon.
super. limbi ☾ Alt. 16 32 $\frac{1}{2}$
Inferioris 15 59 $\frac{1}{2}$
Diameter 0 33
9 52 $\frac{1}{2}$ Repetita declin.
super. Limbi 17 33
Inferioris 18 5 $\frac{1}{2}$ Au.
9 57 10 Repetita distantia
inter ☾ et Os 37 56 $\frac{1}{2}$
9 59 20 Pegasi
per Sext. Δ 37 56

INQUISITIO LOCI ☾
SECUNDUM OBSERVATIONES DIE 4 ET 5 AUGUSTI FACTAS,
CUM PROPE MERID. ESSET.

DIE 4 AUGUSTI, P. M.

H. 9 13' Ascens. R.
Capitis Ophiuchi 258 56
Ang. addend. 19 20 $\frac{5}{8}$
Ascens. R. centri ☾ 278 17
Declinatio eiusdem
austr. 19 2
Longitudo 7 51 $\frac{1}{2}$ Z
Latitudo 4 15 $\frac{1}{2}$ B.
H. 9 20 Asc. R. oris Pegasi 320 58
Asc. R. ☾ 278 19 $\frac{1}{2}$
Decl. au. 19 2

| Ex obseruatione | Ex Prut. Mæst. | Ex Alph. Cyp. |
|----------------------------|----------------|------------------|
| Long. 7 53 $\frac{1}{8}$ Z | 8 21 Z | 7 56 Z |
| Lat. 4 15 $\frac{1}{8}$ B. | 4 57 B. | 4 56 B. |

Parallaxis ☾ in altitudine 15 partium
ex Tab. Pruten. 1° 1' 30".

DIE 5 AUGUSTI.

9 18 Asc. R. capitis
Ophiuchi 258 56
Asc. R. centri ☾ 292 54 $\frac{3}{8}$
Declinatio eius 17 50 $\frac{1}{2}$

| | | | |
|---------|-----------------------|-----------------------|---------------------|
| | Longitudo | 21 | 48 $\frac{1}{2}$ 7 |
| | Latitudo | 3 | 57 $\frac{1}{2}$ B. |
| 9 28 | Afc. R. centri | 292 | 58 |
| | Decl. au. | 17 | 50 |
| | Ex observ. | Ex Prut. | Ex Alph. |
| | | Mæfl. | Cypr. |
| Longit. | 21 52 $\frac{1}{2}$ 7 | 22 8 7 | 21 52 7 |
| Latit. | 3 57 $\frac{1}{2}$ B. | 4 39 $\frac{1}{2}$ B. | 4 38 B. |

Parallaxis Altitudinis 16 Partium 59' 48".

N. B. Pro latitudine ¶ vel parallaxi aut etiam refractione examinanda. Anno 1587 die 4 Augulti hora exquifite 9 P. M. fuit ¶ in Meridiano propinqua tropico 7 et habuit fuprema pars ejus

| | | |
|-------------------|----|----|
| Altitudinem | 15 | 20 |
| Infima | 14 | 47 |
| Diameter apparens | 0 | 33 |

Ergo vera altitudo centri ¶ 15 3 $\frac{1}{2}$

His aufert refractione

ad lummum 5

vt fit vera alt. vifa 14 58 $\frac{1}{2}$

Hæc fi auferatur ab

alt. æquat. 34 5 $\frac{1}{2}$

vt fit vera decl. 19 7

Longitudo autem ¶ per obferuationem fi eo reuocetur, fuit in 7 44 7 cum latitud. 4 16 B.

Declin. eius loci

in Ecliptica eft 23 18

Hinc fi auferatur

obferuata declin. 19 7

Prouenit latitudo vifa 4 11

Vera autem latitudo erat 4 58

Ergo parallaxis latitudinis 0 47

Eft idem fere parallaxis altitudinis obferuata.

Nota, quod Latitudo obferuata prius annotata 5 fcrup. excedit, fit propterea quod non illic habita eft ratio Refractionis, quæ quina illa minuta detrahit.

Per fupputationem autem e Tabulis Prutenicis inuenitur, quod parallaxis ¶ in circulo altitudinis debuerit eße M. 61 $\frac{1}{2}$, fuit enim duplex ¶ a Sole 263 G. 2 M. & coæquata anomalia 218 G. 15 M. vnde in duplici diftantia a vertice 150 quæ refpondet 15 grad. Altitudinis prouenit hæc parallaxis ¶.

Parallaxis ¶ fecundum Tab. Prut. 61' 30"

Parallaxis ¶ ex obferuatione habita 47 0

Differentia vtriusque quam quæfuiimus 14 30.

N. B. Patet itaque, quod quarta parte gradus varientur parallaxes per obferuationem & fupputationem inquitæ, oportet itaque aut in parallaxibus lunaribus aut in latitudinibus, aut etiam refractione non rite conftituta, fenfibilem aliquem fubeße errorem. Quantum ad parallaxes per fupputationem attinet, vix minores eße poßunt, fed potius maiores admittendæ, liquidem ipfa Ptolemaica Hypothefis eas Coperniana maiores potius & nullatenus minores efficit. Probabilius itaque erit vel circa latitudinem maximam lunarem, non fatis exacte inuentam, vel a Ptolomæj temporibus huc vsque mutatam latere errorem aliquem, aut etiam in refractione lunari multo aliter quam in fole rem fe habere, eamque in luna multo maiorem evadere quam in fole vel reliquis fideribus.

Verum, cum nos refractionis loco detraximus 5 minuta, quantum vix Sol in altitudine 15 partium efficere poteft, & verofimilius fit lunam non poße refractionem in tali fitu maiorem ingerere, & nimia foret, fi ea ad 20 fcrupula prout hic requiritur (fi congruentia aliqua concilianda foret) idcirco in limite maximæ latitudinis, vel a Ptolomæo non recte inventa vel hucusque mutata, error fenfibilis exiftit, qui propter mutatam declinationem Eclipticæ nullatenus excufari poteft, vt in ftellis fixis et forte etiam in reliquis pla-

¹ Cf. T. II pp. 137 et 411 noftræ editionis (Progymn. pp. 125 et 460).

netis. Nam propter propiorem acceßum Eclipticæ ad æquatorem nunc quam olim, oporteret in eo loco maximam latitudinem Lunæ angustior fieri quam olim erat tertia plus parte gradus, cum potius ex obseruationibus præcedentibus requiratur, vt maior nunc sit latitudo Borea in parte Eclipticæ Austrina quam olim. Verum de his cogita & inquire accuratam veritatem, id quod potest fieri, cum ¶ similiter iuxta Cancri initia Meridianum tranfit, existens iuxta limites maximæ latitudinis, et obseruando latitudinem et parallaxin eius iuxta nodos in initijs ♊ et ♋. Verum cum res hæc magni sit momenti, examinemus etiam diej sequentis obseruationem in luna, quæ fiebat prope transitum ejus per Meridianum.

Die 5 Augusti H. M. 26 fuit ex obseruatione longitudo ¶ 21 grad. 52' ♋, & latitudo 3 grad. 57½'. Verum si habeatur ratio refractionis, vt prius, fuit proxime latitudo ¶ saltem 3 grad. 53' et quoniam tunc ¶ erat vltra 90 gradum quasi dimidia hora parallaxis in circulo altitudinis e Tabulis Prutenicis reperitur 59½'. Nam duplex longitudo a ☉ est 287 grad. 36' & coæquata anomalia ¶ 230 grad. 47', et parallaxis latitudinis in tali situ insensibiliter variatur. Est autem ex tabulis tunc latitudo ¶ ad summum 4 grad. 40' quam obseruatio dedit 3 grad. 53 vt sit hinc parallaxis latitudinis 0 gr. 47' vel potius ob aliqualem ¶ a 90 distantiam 0 grad. 46'; at ea quæ e tabulis elicitur eßet proxime 0 grad. 59'.

Atque hinc rursus sequitur in 13 proxime scrupulis (quod cum priori in 1½ consentit) vel in latitudine ¶ maxima vel in parallaxi eius vel etiam refractione adhuc non satis subtracta, errorem aliquem lubeße, qui suo tempore (d. v.) modo supra dicto est enucleandus et manifestandus.

Inquisitio loci Lunæ ad diem 5 Augusti

H. 9 M. 48½, quando Lucida Vulturis ferme tranßit Meridianum¹.

Ratio emendationis temporis.

Locus ☉^{lis} H. 9 M. 48 22° 8½' ♎

Afc. R. 144 31

Afc. R. Aquilæ 292 38½

Resp. H. 9 M. 52½ 148 7½

Interuallum inter transitum Vulturis et ¶ 43'' quibus in Afc. R. respondent 11'

Semidiam. ¶ add. 15
26 add.

Afc. R. Vulturis 292° 38

Afc. R. ¶ 293 4

Declin. ex Altit. Mer. 17 48½ Mer.

Resp. Longit. 21 57 48 ♋

Pro reduct. ad orb. prop. 4 45 subtr.
21 53 3 ♋

Quod si ad hoc tempus nempe H. 10 M. 4 per nostram æquationem correctum, quæretur per calculum neoteri-

cum verus locus ¶ , erit ille 21° 51½' ♋, qui sesquialtero tantum minuto ab obseruato differt.

DIE 17 AUGUSTI A. M.

Obseruabatur ¶ hoc modo, erat autem adhuc ante 90 grad.

3^h 59½' Declin.

super. limbi ¶ 17 4 Bor.

Inferioris limbi 16 33½

Diameter apparens 0 30½

4 4 Inter or. limb. ¶ et Aldeb. { 9 4½

4 6 per Sextantem { 9 6

4 7 Eadem dist. repetita 9 6½

4 10 Declin.

super. cornu ¶ 17 6

4 11 Inferioris 16 35

Altit. super. cornu ¶

iuxta hæc tempora 43½

4 16½ Repetita decl.

super. limbi 17 6½

4 17 Inferioris limbi ¶ 16 35½

¹ E codice V.

Fuit tunc Alt. super. cornu $44\frac{1}{8}$
 4 21 Dist. or. limbi ☾
 et Aldeb. 9 $10\frac{1}{2}$
 4 $22\frac{1}{2}$ Repetita eadem dist. 9 12
 4 $24\frac{1}{2}$ 9 14

In posterioribus obseruationibus lumen auroræ aliquantulum impedi-
 bat; erant tamen mediocriter et satis
 etiam bonæ, fideque potius duabus
 posterioribus.

4 27 Repetita declin.
 super. limbi 17 $6\frac{3}{4}$
 4 28 Inferioris limbi 16 36
 Fuit circa hæc tem- 0 $30\frac{3}{4}$
 pora Alt. super. cornu $45\frac{1}{8}$

Postea obseruabatur ☾ a Sole iuxta
 90 gradum vt sequitur. H. 6 M. 4 A. M.
 fuit ☾ in 90 secundum supputationem.

6 2 Declin. super. cornu ☾ 17 12
 Inferioris 16 40
 32

6 4 Repetita declin. super. 17 12
 Inferioris 16 41
 0 31

Altitudo super. limbi ☾ 51 0

| Tempus per Horol. | Dist. ☾ a Mer. per æquat. | Dist. orient. limb. ☾ et ☉ | Fuit tunc Alt. sup. cornu ☾ |
|-----------------------------|------------------------------|-------------------------------|-----------------------------------|
| 6 $7\frac{1}{2}$ | 87 26 | 81 $48\frac{1}{2}$ | $51\frac{1}{4}$ G. |
| 6 $9\frac{1}{8}$ | | 81 48 | |
| 6 $10\frac{1}{4}$ | 86 45 | 81 47 | |
| 6 $11\frac{1}{2}$ | 86 20 | 81 47 | |
| 6 13 | 86 0 | 81 $45\frac{3}{4}$ | |
| 6 $14\frac{3}{8}$ | 85 35 | 81 45 | |
| 6 $15\frac{5}{8}$ | 85 20 | 81 $44\frac{1}{2}$ | |
| 6 17 Declin. super. limbi ☾ | | 17 $12\frac{1}{2}$ | |
| | | Inferioris 16 42 | |
| | | 30 $\frac{1}{2}$ | |

Nota. Alt. Solis iuxta has obf. $11\frac{1}{4}$

Declin. ☉ 10 $26\frac{1}{4}$

6 30 35 Transiit Orientalis limbus
 ☾ per Merid.

Alt. sup. limbi 51 $19\frac{1}{4}$

Inferioris 50 $49\frac{1}{2}$

0 $29\frac{3}{4}$

Fuit tunc ☉ vltra 6 Horam in æqua-
 tore grad. 8 M. 20. erat itaque Hor. 6
 M. 33 $20''$ cum ☾ transiret.

Hactenus mane erat apprimè sere-
 num.

Horologium in Meridie sequente
 iusto celerius mouebatur M. $4\frac{1}{8}$ qui
 error in præcedentibus temporibus
 a Meridie præcedente est corrigendus.

DIE 18 AUGUSTI

H. 1 $56' 50''$ Cum eßet ☾ in verticali
 præcipuo orientali & prope
 capiebatur declinatio
 superioris cornu 17 45

1 59 15 Inferioris 17 $12\frac{1}{2}$

| | Azimut | Altitudo |
|--------------------|--------|--------------------|
| 1 58 0 Or. limb. ☾ | 89 0 | 20 $22\frac{3}{4}$ |
| 2 0 50 | 89 30 | 20 44 |
| 2 3 15 | 90 0 | 21 7 |

Declinatio

2 2 45 Infer. 17 12

2 5 15 Super. 17 48

2 5 45 90 30 21 $28\frac{1}{4}$

2 8 15 91 0 21 $48\frac{3}{8}$

2 8 45 Super. 17 47 } bonæ

2 10 0 Infer. 17 $14\frac{1}{2}$

2 11 92 0 22 $11\frac{1}{4}$

2 12 Primum cornu 22 $24\frac{1}{4}$

Nota. In Azimuthis vbique acci-
 piebatur Orientalis & impletus orbis
 ☾. In altitudine inferior limbus ex-
 cepto hora 2 M. 11 accipiebatur ibi pri-
 mum acumen inferius occidentale.

2 12 Repetita decl. super. 17 $47\frac{1}{4}$

2 $14\frac{1}{3}$ Infer. 17 $14\frac{3}{4}$

2 19 Decl. Calcis II 22 $40\frac{1}{4}$

2 $22\frac{1}{2}$ 22 $40\frac{1}{4}$

2 25 Sup. limb. ☾ 17 47

Inferioris 17 $15\frac{1}{2}$

Alt. inferioris limbi ☾ $24\frac{1}{8}$

2 30 Decl. Luc. ped. II 16 $42\frac{3}{4}$

2 32 7 16 43

Extr. ped. II 22 35

Postea obseruabantur transitus tri-
 um stellarum II in pedibus per 90
 Azimutum, vt inde eruta declinatio
 lunæ.

$2^h 32'$ $7''$ Extrema pedis II
 Alt. 27 $31\frac{1}{2}$

2 37 30 Luc. pes II 20 $14\frac{2}{4}$

2 40 25 Calx pedis II 27 $38\frac{1}{2}$

Hinc potest earum erui declinatio, & quantum in hac desideratur, tantundem in ☾ limitandum venit, erant enim ferme in consimili situ.

| | Declin. | Altitudo |
|--|-------------------------|----------|
| 2 43 Extr. ped. ☿ 22 33 $\frac{1}{2}$ | Calcis 28 $\frac{1}{2}$ | |
| Repetita 22 33 $\frac{1}{2}$ | | |
| 2 46 Luc. pedis 16 42 | Luc. ped. 21 40 | |
| 2 48 $\frac{1}{2}$ Calcis | | |
| ped. ☿ 22 40 | | |
| 2 50 $\frac{1}{4}$ Ead. repet. 22 40 $\frac{1}{6}$ | Calcis 28 50 | |
| 2 51 55 Sup. | | |
| limb. ☾ 17 47 $\frac{1}{4}$ | | |
| Inferioris 17 17 $\frac{1}{2}$ | 27 $\frac{3}{8}$ | |
| 2 53 55 Repet. | | |
| super. 17 48 | | |
| Inferioris 17 17 $\frac{3}{4}$ | 28 | |
| 2 56 Super. | | |
| limbi 17 48 $\frac{1}{4}$ | 28 $\frac{1}{8}$ | |
| Inferioris 17 18 | | |

N. B. Pro examine sextantis in omnibus his obseruationibus accipiebatur distantia inter Aldeb. et luc. ☿ hoc modo

I 35 31 $\frac{1}{2}$
II 35 32
III 35 32

Patet itaque quod Sextans satis bene se habeat.

Postea denuo obseruabatur ☾ declinatio in spatio quasi intermedio inter 90 grad. Azimutalem & Meridianum idque hoc modo.

| | Declin. | Altit. infer. limbi |
|---|---------|---------------------|
| 4 42 $\frac{1}{3}$ Infer. | | |
| limb. ☾ 17 21 | 41 20 | |
| 4 42 $\frac{5}{8}$ Superioris 17 51 $\frac{1}{2}$ | 41 25 | |
| 4 43 $\frac{5}{8}$ Inferior. 17 21 | 41 30 | |
| Superioris 17 51 | | |
| 4 45 Inferior. 17 21 $\frac{1}{4}$ | 41 35 | |
| Superioris 17 51 $\frac{1}{4}$ | | |
| 30 | | |
| Ergo declin. centri 17 36 | | |

Nota. Omnes hæ antecedentes obseruationes sunt satis bonæ, potesque te tuto illis fundare.

¹ Cf. T. II p. 412 (Prog. p. 461).

Postea obseruabatur ☉ a ☾ hoc modo

| | Declinatio | Altitudo |
|--------------------------------|---------------------|------------------|
| 6 51 ☉ | 10 4 | 15 $\frac{1}{4}$ |
| 6 52 $\frac{1}{2}$ | 10 3 $\frac{1}{4}$ | |
| 6 53 | 10 3 $\frac{1}{4}$ | |
| 6 54 Infer. | | |
| cornu ☾ 17 25 | | |
| Superioris 17 54 $\frac{3}{4}$ | | |
| Diameter 0 29 $\frac{3}{4}$ | | |
| 6 56 Infer. | 17 24 $\frac{1}{2}$ | 51 $\frac{1}{6}$ |
| Superioris 17 54 $\frac{1}{2}$ | | |
| 30 | | |
| 6 59 $\frac{5}{8}$ Infer. | 17 23 $\frac{1}{2}$ | 51 $\frac{1}{4}$ |
| Superioris 17 53 $\frac{3}{4}$ | | |

Postea obseruabatur ☉ & ☾ in distantia æquat. H. 7 M. 17 ☾ in 90 gradu supputabatur eBe.

| ☾ orient. | ☉ orient. | Dist. æquat. |
|-------------------|--------------------|---|
| 7 3 $\frac{1}{2}$ | 5 32 $\frac{1}{2}$ | 75 8 $\frac{1}{2}$ 69 36 |
| 7 4 $\frac{1}{2}$ | 5 22 $\frac{1}{2}$ | 74 58 69 35 $\frac{1}{2}$ |
| 7 6 $\frac{1}{8}$ | 4 57 $\frac{1}{4}$ | 74 31 $\frac{1}{2}$ 69 34 $\frac{1}{4}$ |
| 7 8 $\frac{1}{6}$ | 4 30 $\frac{1}{2}$ | 74 5 69 34 $\frac{1}{2}$ |

| | Declin. | Altit. |
|---------------------------------|---------------------|---------|
| 7 10 $\frac{1}{2}$ Infer. cornu | 17 24 $\frac{5}{6}$ | |
| Super. | 17 54 | ☾ 51 25 |
| | 29 $\frac{1}{6}$ | |

| | | |
|-------------------|---------------------|-------|
| 7 13 Super. cornu | 17 54 $\frac{1}{4}$ | |
| Inferioris | 17 24 $\frac{3}{4}$ | 51 25 |
| | 0 29 $\frac{1}{2}$ | |

| | | |
|---------------------------|---------------------|-------|
| 7 15 $\frac{1}{3}$ Super. | 17 54 $\frac{1}{2}$ | |
| Inferioris | 17 24 $\frac{3}{4}$ | 51 25 |
| | 0 29 $\frac{3}{4}$ | |

| ☾ orient. | ☉ orient. | Dist. æquat. |
|--------------------|--------------------|---------------------------|
| 7 18 $\frac{1}{2}$ | 2 10 | 71 40 69 30 |
| 7 19 $\frac{1}{2}$ | 1 52 $\frac{3}{4}$ | 71 24 69 31 $\frac{1}{4}$ |
| 7 21 | 1 33 $\frac{1}{4}$ | 71 2 vna saltem |

| | | |
|-----------------------------|---------------------|--|
| 7 23 Declin. super. limb. ☾ | 17 54 $\frac{1}{2}$ | |
| Inferioris | 17 24 $\frac{3}{4}$ | |
| | 30 | |

| | | |
|------------------------------------|---------------------|--|
| 7 25 $\frac{3}{8}$ Repetita infer. | 17 25 | |
| Superioris | 17 54 $\frac{1}{4}$ | |
| | 29 $\frac{1}{4}$ | |

| | | |
|---|---------------------|--|
| 7 27 45 Transiit Orient. limbus ☾ per Meridianum habens | | |
| Alt. in super. | 52 0 ¹ | |
| Inferiore | 51 29 $\frac{3}{4}$ | |
| | 0 30 $\frac{1}{4}$ | |

habuitque eodem instanti declin.

| | |
|--------------------------------------|--------|
| <i>Inferioris limbi</i> | 17 25 |
| <i>Superioris</i> | 17 55 |
| <i>Altit. infer. Limb. ☾</i> | |
| <i>in Mer.</i> | 51 27½ |
| <i>per Muralem, non satis certa.</i> | |
| 7 29 <i>Repetita declin. infer.</i> | 17 25 |
| <i>Superioris</i> | 17 55 |
| <i>Diameter ☾</i> | 0 30 |

| | ☾ occid. | ☉ orient. | Diff. æquat. |
|-------|-------------|--------------|-----------------|
| 7 33½ | 1 21 | 68 3 | 69 24 |
| 7 34½ | 1 37½ | 67 49 | 69 26½ |
| 7 36 | 1 56½ | 67 27 | 69 23½ |
| 7 37¼ | 2 15½ | 67 7 | 69 22½ |
| 7 38¼ | 2 31¾ | 66 52 | 69 23¾ |
| | | | <i>dubia</i> |
| 7 39⅓ | 2 45¼ | 66 37 | 69 22¼ |

Nota. Vbique accipiebatur Orient. limb. ☾.

| | |
|---------------------------|--------|
| 7 42 Declin. infer. limbi | 17 25½ |
| H. M. S. Super. limbi | 17 55 |
| 7 43 25 Declinatio ☉ | 10 2½ |
| 7 45 25 Eadem repetita | 10 2½ |
| 7 47½ Repetita | |
| declin. sup. limb. ☾ | 17 25½ |
| 7 48⅓ Inferioris | 17 55½ |

Horologium in Meridie proxime sequenti 5' 10" iusto velocius mouebatur.

P. M. Obseruationes ☾

| | Azimuth or. limbi ☾ | Declin. super. limb. ☾ | Infe- rioris | Altitud. super. cornu |
|---------|---------------------------|------------------------------|-----------------|-----------------------------|
| 2 44 5 | 77½ | 17 47 | 17 17¾ | 13 4 |
| 2 48 55 | 76 42 | 17 47 | 17 18½ | 12 23 |
| 2 53 | 75 50 | 17 46½ | 17 17¼ | 11 53 |

Amplius ☾ obseruari non potuit, impedientibus rariusculis et albis nubi-
bus ☾ simillimis, quæ in occasu con-
sistebant.

N. B. ☾ fuit hoc die in maxima latitudine australi in principio ☉, unde potest periculum fieri de ipsius latitudine adhibita parallaxi, quæ ex declinationibus eius in decliuiori situ ante et post meridianum expiscari poterit, collata cum ea declinatione quæ in Meridiano fit et adhibita annotata ipsius altitudine, hincque collatis singulis iudicium institui de latitudine, parallaxique, vel etiam refractione, prout convenientius fuerit. Sunt enim omnes hæ obseruationes satis diligenter habitæ, conferendæque veniunt cum obseruatione ☾ habita vltimo, cum circa solstitium hibernum in minima altitudine et maxima etiam Latitudine Borea versaretur. Oportet videre quomodo declinationes stellarum se habeant in consimili altitudine, vel confer cum declinatione ☉ in altitudine 15 partium habita.

INQUISITIO LOCI ☾

AD DIEM 17 ET 18 AUG. CUM PROPE 90 GRAD. ECLIPTICÆ A. M. ESSET.

| | |
|------------------------------|-------|
| DIE 17 AUGUSTI H. 6. 5 A. M. | |
| Diff. æquat. inter ☉ | |
| et or. limb. ☾ | 81 47 |
| Alt. ☉ fuit part. 11½ hinc | |
| pro Refr. add. | 3 |
| Diff. ☉ et or. limb. ☾ vera | 81 50 |
| Adde ☾ semidiam. | 15 |
| Distantia centri ☉ et ☾ | 82 5 |

Die 16, H. 18 M. 5 P. M. Locus ☉ 3 4½
☾ ex nostris Tabulis, Parall. longitud.
add. 2½ in altit. ☉ or. 11½, nam parall.
altit. fuit 2' 54".

| | |
|---------------------|--------|
| Locus ☉ visus | 3 6½ ☾ |
| Pro refract. subtr. | 3 |
| Locus ☉ congr. obs. | 3 4 ☾ |
| Ascens. R. ☉ | 155 1 |
| Differ. Asc. ☾ sub. | 82 5 |
| Centri ☾ Asc. R. | 72 56 |
| Declin. B. | 16 56½ |

| | Ex observ. | Ex Prut. Mæst. | Ex Alph. Cypr. |
|------------------|------------|-------------------|-------------------|
| Long. ☾ 13 37 II | 13 44 II | 14 2 II | |
| Latit. 5 36½ M | 4 48 M | 4 47½ M | |

Altitudo ☾ 51½°, Parallaxis Altit. 32'
41". Tempus reductum 17. 35 p. m.

DIE 18 AUGUSTI.

H. $7\frac{1}{4}$ A. M. dist. æquat. ☉
 et or. limbi ☉ 69 30
 Adde pro refractione ☉ 2
 Adde femidiam. ☉ 15
 Distantia centri ☉ et ☉ vera 69 47

Altitudo ☉ fuit tunc 16 p. cum iam parallaxis longitudinis ☉ respectu centri terræ, et parallaxis, quam refractionis in longitudine causari potest, sint æquales, nam utrobique fit parallaxis 2 quasi min. Igitur locus ☉ ex Tabulis nostris ad tempus datum excerptus retinebatur.

Die 17, H. 19 M. 15 P. M.

Locus ☉ 4 $5\frac{1}{8}$ mp
 Ascens. R. loci ☉ 155 59
 Distantia centri ☉ subtr. 69 47
 Centri ☉ Ascens. R. 86 12
 Declin. B. 17 $39\frac{1}{2}$
 Tempus red. $17^d 18^h 45^m$.

| | Ex observ. | Ex Prut. Mæst. | Ex Alph. Cyp. |
|-----------------------------|---------------------|-------------------|------------------|
| Long. 26 $21\frac{1}{2}$ II | 26 42 II | 27 6 II | |
| Latit. 5 $48\frac{1}{8}$ M | 4 $59\frac{1}{2}$ M | 5 0 M | |

Altitudo ☉ $51\frac{3}{4}^\circ$, Parallaxis Altit. $32'' 53''$.

PRO INQUISITIONE MAXIMÆ LATITUDINIS ☉
 CUM CIRCA TROPICUM VERSARETUR.

Primum die 17 cum ☉ esset in 90 gradu quam proxime H. 6 M. 5 P. M. N. antecedentem fuit ut ex prioribus patet longit. ☉ in 13 G. 37 M. II latitudine eius visa existente 5 G. $36\frac{1}{2}$ M. Mer. Fuit autem per numerationem Tabularum tunc vera latitudo ☉ 4 G. 48' quæ demta a priori relinquit hoc modo parallaxin latitudinis quæ eadem erat cum circulo verticali 0 G. 48'. At per numerationem erat tunc saltem parallaxis altitudinis M. 33. Ideoque excedit prior 15 scrupulis, unde vel in latitudine ☉ vel in parallaxi errorem quindenorum latere scrupulorum necessarium euadit. Nam refractionis implicatio nullum hic sensibilem locum obtinet, eo quod altitudo ☉ esset maior 51° , at vix ex errore parallaxeos hæc deviatio contingit. Versabatur enim ☉ non longe a limitibus maximæ suæ remotionis a terra, quæ eandem fere Ptolomæo & Copernico distantiam efficiunt. Nec ob id eo in situ ☉ parallaxis aliter huic quam illi insinuat, ut ob id parallaxin eius fuisset saltem 33 scrupulorum maxime consentaneum euadit, quindenis illis minutis in latitudine vera desideratis. Hincque colligitur latitudinem ☉ maximam nunc esse 5 G. 15 M. quarta parte gradus maiorem quam Ptolomæus adinuenit. Sed videamus etiam sequentis diei observationem prope ipsum solstitium diligenter habitam.

Alia consideratio pro latitudine ☉ iuxta ipsum solstitium æstivum.

Die 18 Augusti Hora $7\frac{1}{4}$ P. M. N. antecedentem, fuit ☉ proxima nonagesimo gradui carens parallaxi longitudinis, ergo locus eius visus & verus per observationem erat in 26 G. 21 M. II cum latitudine visa $5\ 48\frac{1}{8}$, vera ipsius latitudine per numerationem existente $4\ 59\frac{1}{2}$ tanquam maxima Ptolomæica. Hanc si abstuleris a priori, residuantur 49 pro parallaxi ☉ quam tamen tunc habebat per numerationem minorum 33, ut heri, quæ sublata a 49 relinquunt Min. 16 quibus Latitudo ☉ maxima iusto minor est. Posita hac igitur vel sic, si auferas parallaxin altitudinis quæ reperitur per numerationem ab ipsa latitudine visa, relinquitur maxima Latitudo ☉

| | |
|-------------------|------|
| Latitudo visa | 5 48 |
| Parallaxis Latit. | 33 |
| Latitudo vera ☉ | 5 15 |

Patet itaque, quod adhuc excedat latitudo ζ maxima ptolomaicam annotationem quarta parte gradus, quod plane conuenit cum priori. Sed faciamus adhuc eiusdem rei periculum: cum ζ per Meridianum transiret habens altitudinem in superiori cornu 52 G. 0 M. in inferiori 51 30 vt sit centri ipsius altitudo 51 G. 45 M., fuit autem tunc longitudo ζ 26 25 II, eius declinatio est 23 G. 28½ M. At ζ declinatio erat ex obseruatione 17 39½, quæ si auferantur a priori relinquunt ipsam ζ latitudinem visam 5 part. 49', a qua si auferantur 33 minuta parallaxeos prouenit vera latitudo P. 5 M. 16, quæ adhuc quadrante proxime gradus excedit Ptolomaicam.

Potes itaque satis tuto vti latitudine ζ maxima part. 5 M. 15 atque huic tabulam fundare, quod etiam satis consentit cum ijs quæ obseruabantur ζ existente iuxta solstitium hybernum, videlicet iuxta 4 et 5 Augusti præteritum.

Quod si de parallaxi dubitas, potes eam examinare ex declinatione ζ habita iuxta 90 gradum azimuthali, mane, et etiam P. M. cum ζ declinatus esset, et inde eruere parallaxis mensuram, collatione facta cum declinatione iuxta 90 grad. ab ortu vel etiam prope Meridianum.

DIE 31 AUGUSTI.

H. 6.50 P. M. fuit ζ in 90 G. iuxta supputationem.

Occ. limbus ζ obseruabatur in Azimutho a Merid. versus occ. 4° 12' et habuit sup. cornu Alt. 15° 14'.

| | Azimuth occ. limbi ζ | Altitudo super. cornu ζ |
|---------|-------------------------------|----------------------------------|
| 7 13 41 | 6 52 | 15 5¾ |
| 7 15 5 | 7 10 | 15 3 |
| 7 16 18 | 7 22½ | 15 1½ |

| | | |
|-------|--|-------|
| 7 20½ | Inter occ. iimb. ζ et os Pegasi | 54 8½ |
| 7 22 | per Sext. Δ | 54 7 |
| 7 23½ | | 54 6½ |
| 7 25 | | 54 6 |

| | Azim. occ. limbi ζ a Mer. ad occ. | Altitudo super. cornu |
|---------|--|--------------------------|
| 7 28 1 | 10 10 | 14 50 |
| 7 28 59 | 10 25 | 14 49 |
| 7 30 0 | 10 38 | 14 46½ |

DIE 6 SEPTEMBRIS VESPERI.

N. B. Inter nubes obseruabatur.

Eclipsis ζ obseruabatur in diuersis obseruatorijs quoad inter nubes licuit, cuius obseruationis tempora quæ vbique assignantur, sunt verificata ad stellas.

In obseruatorio subterraneo Nobilis ipse aliquando interfuit.

Per Quad. volub. et horol. minus, correctum.

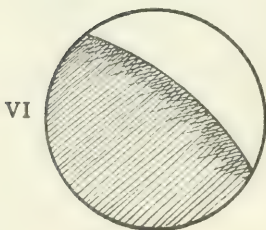
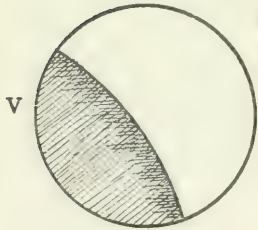
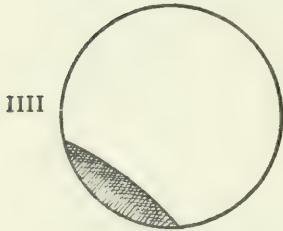
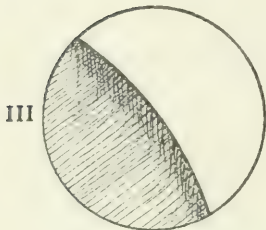
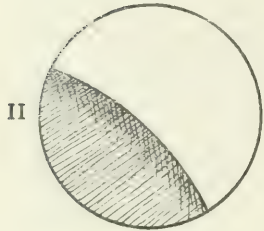
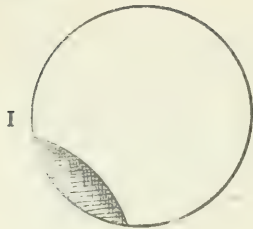
H. 7 M. 53½ Videbatur ζ non satis plena inter nubes. Fuit tunc lucida Vulturis in Azimutho a Meridiano versus ortum 0 25 et habuit Altitudinem 41 58½. Hinc ex globo magno inventa est Asc. R. M. C. 292 grad. 6 M. per quam & Asc. R. \odot datum tempus assignatum est correctum: eodem modo & singula tempora in sequentibus obseruationibus sunt verificata.

H. 8 M. 30½ Videbatur luna quasi medium vel fere amissæ lumen, idque inter nubes. Fuit tunc lucida vulturis in Azimutho a Meridiano versus occasum 11 G. 41', Altit. 41 G. 28½', Resp. Asc. R. M. C. 301 grad. 17 min.

H. 8 M. 33 Videbatur sensibiliber maior pars Lunæ quam dimidia offuscata.

8 38¾ Quasi tertia pars de ζ restabat illuminata, sed erat adhuc plus quam tertia pars, ita esset fere ¾. Erat tunc Azimuth lucidæ vulturis 14 15 etiam ad occasum. Altit. 41 14. Hinc M. C. Ascens. R. 303 grad. 22 Min.

H. 8 M. 43 Quasi tertia pars restabat de ζ vel potius paulo minus.



H. 8 M. 47 Quasi quarta pars restabat illuminata. Fui tunc Vult. stella in Azimuto occ. 17 G. 5', Altit. 40 45½, Ascens. R. M. C. 305 G. 25'.

H. 9 M. 44 Quasi quarta pars vel paululum minus lucere apparuit, erat tunc Altit. super. limbi illius 25 G. 4'.

H. 10 M. 11 Adhuc eadem quantitas quasi ¼ de luna obscurationis expers videbatur.

Vtrobique inter nubes sic apparuit.

H. 11 M. 25½ Tota Luna illuminata conspiciebatur, sed vtrum prius umbram totaliter fuisset egressa, propter densitatem nubium discernere non licuit, tunc autem revera tota plena fuit.

Postea cum luna dissipatis pro parte nubibus manifeste integra luceret, ita vt sequitur in Azimutho & Altitudine observabatur, vnde & tempora adscripta per datum ☾ locum sunt vt antecedentia satis vera.

| | Azimuth or. limbi ☾ a Mer. ad ortum | Altitudo super. Limbi ☾ |
|----------------------------------|--|----------------------------|
| 11 ^H 36½ ^M | 7 40 | 31 33 |
| 11 38½ | 7 10 | 31 35 |

In obseruatorio Australi Petrus Jacobi per Armillas australes & horologium maius.

N. B. Tempora assignata sunt verificata.

H. 7 M. 53½ Cum Caput Ophiuchi distabat a Merid. versus occasum per Armillas Australes 33 G. 0'. Videbatur incerte tamen propter nubes ☾ talis. [I].

H. 8 M. 27½ Aquila occ. 7 54 ita apparuit ☾, incerte. [II].

H. 8 M. 32½ Aquila a Mer. occ. 9 8 etiam incerte. [III].

H. 11 M. 25 ☾ videbatur integra, distabat autem tunc ipsa ☾ a Meridiano versus ortum iuxta limbum occid. 9 G. 17'. Sed non erat certa obseruatio propter nubes intercurrentes.

H. 11 M. 37 Certius videbatur ☾ lumen suum totum recepisse rarioribus factis nubibus, distabat vero a Merid. versus ortum iuxta limbum Orientalem grad. 4 min. 59. Hæc certior priore.

In obseruatorio Boreali Gellius per Armillas Bor. et horolog. medium.

H. 7 M. 53½ Cum Caput Ophiuchi abesset a Merid. occ. 33 G. 10' videbatur tantum de ☾ defecisse, sed inter nubes. [IIII].

H. 7 M. 58½ Caput Ophiuchi a Meridiano versus occasum 34 21. Videbatur de ☾ defecisse, sed inter nubes. [V].

H. 8 M. 29½ Videbatur hæc figura ☾, ignoratur an vere. [VI].

Vlterius impediende domo ☾ per Armillas Boreales obseruari non potuit, præsertim in fine cum ☾ Meridiano appropinquaret.

| Calculus | Alphonſinus Cyp. | | Prutenicus Mæſtlini | | Noſter | |
|-----------|--------------------------------|------------------|---------------------|---------------|----------|------------|
| Tempus | Reductum | Reduct. & æquat. | Reductum | Red. & æquat. | Reductum | Red. & æq. |
| Ingreſſus | 8 ^h 37 ^m | 8 48 | 8 8 | 8 19 | 8 5 | 8 16 |
| Medium | 10 10 | 10 21 | 9 50 | 10 1 | 9 47 | 9 58 |
| Finis | 11 43 | 11 54 | 11 32 | 11 43 | 11 29 | 11 40 |

OBSERVATIONES SATURNI.

DIE 6 JANUARIJ P. M.

5^h 46' 43" ♄ in Merid. habuit Altitu-
 nem per volubilem 41 52³/₈
 per Q. Tychon. nouo 41 52³/₈
 veteri 41 53

Poſtea obſeruabatur ♄ ab Aldeboram

6 20 Diſt. ♄ & Aldebor. 38 1¹/₂
 6 21 Inter ♄ & Aldebor. 38 1³/₄
 Declinatio ♄ vno 7 47

6 21¹/₂ per Sextantem 38 1³/₄
 6 25 38 1³/₄
 6 25¹/₂ 38 1¹/₄

Pone itaque circa hoc

tempus diſt. 38 1¹/₂
 infallibiliter, & declinationem
 ipſius 7 47¹/₄

vel pete eam potius ex Altitudine ip-
ſius Meridiana.Deinde accipiebatur ♄ viceverſa ab
ea quæ eſt prima in ala Pegafi.

6 36 Inter ♄ et I in 43 31
 6 37 ala Pegafi 43 30

Varietas propter ventum & ☾.

7 0 Repetita declinatio ♄
 vno 7 47
 altero 7 47¹/₃
 7 25 Eadem ♄ decl. vno pinn. 7 46¹/₂
 altero 7 46¹/₃

Poſtea diligenter locus ♄ obſeru-
batur eo quod inſtaret Ecliptica per
☾ conjunctio.

7 33 Inter ♄ et I Alæ Pegafi 43 29¹/₆
 7 38 per Sextant. veter. 43 30
 Repetita eadem 43 30¹/₄

Potes itaque abſque omni ſenſibili
errore aſſumere diſtantiam 43 30 a ♄
ad primam alæ.7 41 Inter ♄ et oculum ☿ 38 1¹/₆ bis.Poſtea per Armillas obſeruabatur ♄
& Aldeboram

| | ♄ occid. | Oculus ☿ or. | Diſt. æquat. |
|----------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| 7 45 ¹ / ₆ | 30 40 | 7 20 ³ / ₄ | 38 0 ³ / ₄ |
| 7 46 22 | 30 57 ¹ / ₂ | 7 3 | 38 0 ¹ / ₂ |
| 7 47 35 | 31 15 ¹ / ₂ | 6 45 ¹ / ₃ | 38 0 ⁵ / ₈ |

Hinc poterit vna verificari horolo-
gium.

7 50 30 Declinatio ♄
 vno pinn. 7 46²/₃
 altero 7 46¹/₄

Inſtante propius applicatione ♄ per
☾ denuo poſt cœnam obſeruabatur
rurſus primo ♄ in hunc modum.

N. B. Hæc tempora ſunt correctæ.

8 37 Declinatio ♄ vno pinn. 7 46¹/₂
 altero 7 47

8 44 Inter ♄ et Aldeboram 38 1
 8 45 38 0³/₄
 8 47 38 0¹/₂

Eadem repetita 38 1

Pone itaque diſtantiam hanc inter
♄ & Aldeboram, citra omnem ſenſi-
bilem errorem 38 0³/₄.

| | ♄ occid. | Aldeb. occ. | Diſt. æquat. | |
|---------|-----------------------------------|-----------------------------------|----------------------------------|--------------------------|
| 8 53 5 | 46 32 ¹ / ₄ | 8 30 ¹ / ₂ | 38 1 ³ / ₄ | Tem- pora correctæ |
| 8 54 38 | 46 54 ¹ / ₂ | 8 53 ¹ / ₂ | 38 1 | |
| 8 59 40 | 48 16 ³ / ₄ | 10 14 ¹ / ₂ | 38 2 ¹ / ₄ | |

Pone itaque diſtant. æquat. 38 1

Nam ☾ admodum vicina præſentia
exactam obſervationem impediēbat,
eſt enim talis, vt ſufficiat operationi.

DIE 6 JANUARIJ.

Pro loco ♄ ex antecedentibus
obſervationibus.

5 46 Altitudo ♄ Merid. 41 52 40

| | | | | |
|------------------|-------------------------------------|-----|------------------|----------------|
| | Altitudo æquat. | 34 | 5 | 20 |
| | Declinatio η Bor. | 7 | 47 | 20 |
| 6 $\frac{1}{3}$ | Declinatio η per Armillas | 7 | 47 $\frac{1}{4}$ | |
| 6 21 | Inter η & oculum γ | 38 | 1 $\frac{3}{4}$ | |
| | Declinatio oculi γ | 15 | 36 $\frac{3}{4}$ | |
| | Differentia ascenf. | 38 | 4 | 9 |
| | Afc. R. oculi γ | 63 | 4 | 40 |
| | Afcenf. R. η | 25 | 0 | 31 |
| | Declinatio η Bor. | 7 | 47 | 20 |
| | Longitudo | 26 | 0 | 21 \vee |
| | Latitudo | 2 | 27 | 22 M. |
| 6 41 | Inter η & primam Alæ Pegasi | 43 | 30 $\frac{1}{2}$ | |
| | Declinatio I Alæ Pegasi | 13 | 0 $\frac{1}{4}$ | |
| | Diff. ascenf. | 43 | 58 | 8 |
| | Afc. R. I Alæ | 341 | 3 | 20 |
| | Afc. R. η | 25 | 1 | 28 |
| 7 37 | Diff. eadem | 43 | 30 | |
| | Diff. ascenf. | 43 | 57 | 37 |
| | Afc. R. η | 25 | 0 | 57 |
| 7 44 | Inter η & oculum γ | 38 | 1 $\frac{1}{2}$ | |
| | Diff. ascenf. | 38 | 3 | 29 |
| | Afc. R. η | 25 | 1 | 11 |
| Ponatur H. 7. 30 | Afc. R. η | 25 | 1 | 10 |
| | Decl. | 7 | 47 | 0 |
| | Resp. Longitudo | 26 | 0 | 43 \vee |
| | Latitudo | 2 | 27 | 47 M. |

DIE 9 JANUARIJ P. M.

5^h 35' 0" transiit Saturnus Merid.
habuitque altit. max. per Volub.
41 55 $\frac{1}{2}$

Postea finita cœna obseruauimus
 η^{ni} stellam in hunc qui sequitur mo-
dum.

9 35 Inter η et Aldeb.
per Sext. 37 56

incerta propter ϵ præsentem Alde-
boræ.

Fuit tunc Declin. η 7 51 $\frac{1}{4}$
Altit. autem η 23 10

Verum quia luna erat admodum vi-
cina Aldeboræ eius splendor impe-
diebat, quominus videri poterat, igitur
a cornu Boreali γ accipiebatur
eius distantia.

| | η a luc. ped. Erichtonij | Declinatio η M. | Altitudo η |
|--------------------|----------------------------------|-------------------------|--------------------|
| 9 42 $\frac{1}{2}$ | 51 10 $\frac{1}{2}$ | 7 51 $\frac{1}{2}$ | 22 5 |
| 9 45 | 51 10 $\frac{1}{3}$ | 7 51 $\frac{1}{2}$ | 21 45 |
| 9 47 $\frac{1}{2}$ | 51 10 $\frac{1}{3}$ | 7 51 $\frac{3}{4}$ | 21 20 |
| 9 53 | 51 10 $\frac{1}{2}$ | 7 51 $\frac{3}{4}$ | 20 40 |

Postea etiam accipiebatur η in Di-
stantia æquatoria a corde Ω per Ar-
millas maximas in hunc modum.

| | η occid. | Cor Ω orient. | Diff. æquat. | Altit. η |
|--------------------|---------------------|-------------------------|----------------------|------------------|
| 10 1 $\frac{3}{4}$ | 66 54 | 54 28 $\frac{1}{2}$ | 121 22 $\frac{1}{2}$ | 19 $\frac{1}{3}$ |
| 10 4 | 67 26 | 53 56 | 121 22 | 19 $\frac{1}{6}$ |
| 10 7 | 68 14 $\frac{1}{2}$ | 53 8 $\frac{3}{4}$ | 121 23 $\frac{1}{4}$ | 18 $\frac{5}{6}$ |
| 10 9 | 68 43 $\frac{1}{3}$ | 52 38 $\frac{1}{2}$ | 121 22 | 18 $\frac{2}{3}$ |

Pone itaque ad horam circiter 10
Diff. æquat. η a corde Ω part. 121 M.
22 $\frac{1}{2}$ insensibiliter.

10 12 Declinatio η Bor., vno 7 52
altero pinnac. 7 52 $\frac{1}{4}$

Hinc ex antecedentibus per distan-
tiam Sextantis factam simul collatis
potest verificari η locus circa hanc
altitudinem & inuicem conferri, cum-
que transitu eius per Meridianum
collato ad transitum Lucidæ \vee exa-
minari. Erat enim differentia supe-
rius accepta vtriusque transitus in
tempore 4' 5" quod facit in æqua-
tore 1 grad. 1 $\frac{1}{4}$ min. Constat itaque η
Afcenf. R. tunc ex nota Afcenf. R.
lucidæ \vee .

| | | |
|--------------------|---|---------------------|
| 11 57 | Distantia inter η & luc. pedem Erichtonij communem cum Bor. cornu γ | 51 1 |
| | Declinatio η | 8 1 $\frac{3}{4}$ |
| | Altitudo η | 3 5 |
| 12 4 $\frac{1}{2}$ | Diff. inter η & eandem | 50 59 $\frac{1}{2}$ |
| | Declinatio η | 8 6 $\frac{1}{4}$ |
| | Altitudo | 2 25 |

Ex hac obseruatione collata cum
antecedenti, quæ facta erat circa
horam 10 in Altitudine η 22 part.
& cum ea quæ per Meridianum ad-
hibito motu proprio Saturni potest
ipsum refractione circa horizontem
indagari, & per consequens etiam
 γ Refractio in consimili situ in-
notescit melius, quam ex Venere.

Potest tamen collatio fieri vtriusque tam ♀ & ☿ quoad Refractionem & applicari ☿.

DIE 14 JANUARIJ P. M.

Postea¹ obseruabatur ☿ ab oculo ☿ per Sextantem in hunc modum, cum ambo satis alti essent.

| | | |
|--|---------------------------|-------------------------------------|
| 5 ^h 47' | Inter ☿ & Aldeboram | 37 41 ³ / ₄ |
| 5 50 | Repetita inter ☿ & Aldeb. | 37 41 ⁵ / ₆ |
| 5 52 ¹ / ₂ | Eadem adhuc repetita | 37 41 ³ / ₄ |
| Declinatio ☿ circa hæc tempora per Armill. | | |
| | altero pinnacidio | 7 56 ¹ / ₂ B. |
| 6 36 | Repet. dist. ☿ et Aldeb. | 37 41 ³ / ₄ |

bis bene, ergo priores etiam bonæ.

Pro faciendæ autem periculo Sextantis obseruabatur inter Lucidam ☿ et Aldeb. et videbatur ea per eundem Sextantem 35 32¹/₂ 35 32¹/₂ ter, bona.

Cum itaque vbique Sextans præberet hanc distantiam 35 32¹/₂ qualem prius obseruauimus, et reuera est, patet etiam priores obseruationes veras esse.

| | | |
|----------------------------------|-----------------------------|-----------------------------------|
| 6 52 | Repetita declin. ☿ per Arm. | |
| | vtroq. pin. | 7 57 Bor. |
| 6 57 ¹ / ₃ | Pro verificando horologio | 12 7 or. |
| 6 58 ¹ / ₃ | obseruabam Oculum ☿ a | 11 54 ¹ / ₂ |
| 6 59 | meridiano | 11 44 ¹ / ₂ |

Obseruatio ☿ ob refractionem ☿

| | Inter ☿ & ocul. ☿ | Altitudo ☿ | Declinatio ☿ |
|-----------------------------------|-------------------|-----------------------|----------------------------------|
| 11 42 | 37 31 | 2 35 | 8 10 |
| 11 44 | 37 30 | 2 10 | 8 11 ¹ / ₂ |
| 11 51 ¹ / ₆ | 37 27 | | |
| 11 52 ¹ / ₂ | 37 25 | 1 ^{er} quasi | |

Nota. Quando ☿ altus erat circa horam 5^h distabat ab Aldeboram 37 41³/₄, ergo cum motus eius diurnus sit sal-

tem trium minorum non potuit intervallo 6 horarum nisi vnico scrupulo fere propior fieri Aldeboræ, ita vt deberet hic fuisse distantia 37 41. Ergo in altitudine P. 2 M. 35 fuit refractione 10' atque idem in ☿. In Declinatione vero refractione fuit 13¹/₂ Minut. atque idem in ☿^{io}.

DIE 15 JANUARIJ P. M.

| | ☿ orient. | ☿ orient. | Dist. æquat. |
|---------------------------------|-----------------------------------|----------------------------------|--------------|
| 5 0 | 75 2 ¹ / ₂ | 2 34 ¹ / ₂ | 72 28 |
| 5 2 ¹ / ₄ | 74 35 ¹ / ₂ | 2 8 ¹ / ₂ | 72 27 |

Nota. Hæc satis bene conuenit cum illis inter ♀ et ☿.

| | | |
|----------------------------------|---------------------------------------|-----------------------------------|
| 5 4 0 | Transiuit secunda ☿ Merid. in Alt. | 52 53 ¹ / ₂ |
| 5 11 10 | Transiuit ☿ per Merid. in Alt. | 42 4 ¹ / ₃ |
| 5 14 15 | Transiuit Luc. ☿ Merid. per ☿. Volub. | 55 35 |
| | Vera alt. ☿ per Merid. | 42 3 |
| 5 41 ¹ / ₂ | Inter ☿ et oculum | 37 38 ¹ / ₂ |
| 5 44 | ☿ per Sextantem | 37 38 ¹ / ₂ |
| 5 46 | | 37 38 ¹ / ₂ |

Accipiebatur etiam circa id ipsum tempus Declinatio ☿ per Armillas maximas vno pinn. 7 57¹/₂ altero 7 58

DIE 16 JANUARIJ.

H. 5 M. 2 Declin. ☿ 7 59¹/₄ B. Postea obseruabantur transitus stellarum ☿ cum ☿ per Meridianum in hunc modum.

| | | |
|---------|---|-----------------------------------|
| 5 7 38" | transiuit ☿ Merid. habens Alt. per volub. | 42 6 ³ / ₈ |
| | Fuit tunc Oculus ☿ a Mer. or. | 37 35 ¹ / ₂ |
| 5 10 36 | transiuit Luc. ☿ Merid. habens Alt. | 55 35 ¹ / ₂ |
| | Fuit tunc Oculus ☿ orient. | 36 45 ¹ / ₂ |
| | Patet itaque quod dist. æquat. sit | 0 50 |

¹ Scilicet post finem obseruationum distantia inter Venerem et Saturnum, de quibus vide infra inter obseruationes Veneris.

DIE 20 JANUARIJ.

Pro verificando loco η obseruabatur
eius distantia ab oculo γ .

| Distantia η | Altitudo η | Declinatio η |
|---------------------|-----------------|-------------------|
| 37 21 | 27 10 | 8 6 |
| 37 21 | 26 40 | 8 6 $\frac{1}{2}$ |
| 37 21 $\frac{1}{2}$ | 26 10 | 8 6 $\frac{1}{2}$ |
| 37 21 $\frac{1}{2}$ | 25 40 | 8 6 $\frac{1}{2}$ |

Ex his potest colligi η locus & per
consequens Veneris refraçtio in de-
cliuiore situ indagari, & φ° applicari,
præsertim si ea craftina die in alti-
ore situ fuerit a η ^{no}vel aliqua fixa ob-
seruata.

DIE 26 JANUARIJ P. M.

5 4 Declinatio η vno pin. 8 13 $\frac{1}{2}$ B.

DIE 30 JANUARIJ.

Obseruabatur φ & η hoc modo.

| | Dist. φ a η per Sext. vet. | Decl. η | Altit. φ |
|------|--|-----------------------|---------------------|
| 5 29 | 35 41 | 8 21 $\frac{1}{2}$ B. | 21 0 |
| 5 31 | 35 41 $\frac{1}{2}$ | 8 21 $\frac{1}{2}$ | 20 50 |
| 5 33 | 35 41 | 8 21 $\frac{1}{2}$ | 20 35 |

Postea obseruabatur η ab Aldeboram

| | Dist. per Sext. | Altit. η |
|--------------------|-----------------|--------------------|
| 5 47 | 36 42 | 8 21 |
| 5 49 | 36 42 | 8 21 |
| 5 50 $\frac{1}{2}$ | 36 42 | 8 21 $\frac{1}{2}$ |

ter bene

EXAMINATIO OBSERVATIONIS η
DIE 9 JANUARIJ

Pro loco η .

9^h45^m distabat η a lucido pede Erich-
tonij communi cum cornu γ
per Sext. 51 10 $\frac{1}{2}$

| | |
|------------------------------|-----------------|
| Declin. luc. ped. Erichtonij | 28 10 30 |
| Differentia ascensionalis | 49 54 16 |
| Afc. R. lucidi pedis | 75 4 0 |
| Afcenf. R. η | 25 9 44 |
| Pone Ascensionem | 25 10 0 |
| Declinatio B. | 7 51 15 |
| Resp. Longitudo | 26 10 38 \vee |
| Latitudo | 2 27 2 M. |

DIE 14 JANUARIJ.

| | |
|--------------------------------------|---------------------|
| 5 47 Inter η et oculum γ | 37 41 $\frac{3}{4}$ |
| Declinatio η Bor. | 7 56 $\frac{2}{3}$ |
| Diff. ascenf. | 37 45 49 |
| Afc. oculi γ | 63 4 40 |
| Afc. R. η | 25 18 51 |
| Resp. Longitudo | 26 20 49 \vee |
| Latitudo | 2 25 9 M. |

DIE 15 JANUARIJ.

| | |
|--------------------------------------|----------------|
| 5 44 Inter η et Oculum γ | 37 38 30 |
| Declinatio η Bor. | 7 57 45 |
| Diff. ascenf. | 37 42 43 |
| Afcenf. R. η | 25 21 57 |
| Resp. Longitudo | 26 24 7 \vee |
| Latitudo | 2 25 14 M. |

DIE 5 FEBRUARIJ P. M.

| | Declin. η | Distantia ab oculo γ | Altit. η |
|----------|-----------------------|--------------------------------|------------------|
| 7 22 | 8 34 $\frac{1}{2}$ B. | | 33 $\frac{1}{2}$ |
| 7 32 | | 36 13 $\frac{1}{2}$ | 31 5 |
| 7 35 | | 36 13 $\frac{3}{8}$ | 30 55 |
| 7 37 | | 36 13 $\frac{1}{2}$ | 30 45 |
| 7 40 vno | 8 34 $\frac{1}{2}$ | | |
| altero | 8 34 $\frac{1}{2}$ | | |

Horolog. in Merid. sequente fere $\frac{1}{2}$
vnus horæ iusto celerius moueba-
tur, quod intra octiduum non erat
correctum.

DIE 18 FEBRUARIJ.

Obseruabatur η vt eius locus consta-
ret & hinc φ ab oculo γ hoc modo.

| | | |
|-------------------------------------|-------------------|--------|
| 6 11 Inter η & | 35 5 | } Bonæ |
| 6 13 $\frac{1}{2}$ Aldeb. per Sext. | 35 5 | |
| 6 19 obseruabatur declin. η | 9 4 Bor. | |
| altero pinnac. | 9 4 $\frac{1}{2}$ | |

DIE 21 FEBRUARIJ.

| | Declin. η | Dist. inter η et ocul. γ per Sext. vet. | Altit. η |
|--------|-----------------------|---|------------------|
| 6 34 | 9 10 $\frac{3}{4}$ | | 27 |
| altero | 9 10 $\frac{3}{4}$ | | |
| 6 43 | | 34 46 | |
| 6 45 | | 34 45 $\frac{5}{8}$ | |
| 6 47 | | 34 46 | 25 $\frac{1}{2}$ |
| 6 51 | 9 10 $\frac{3}{4}$ B. | | |

DIE 4 MARTIJ P. M.

| | Distantia | Altit. h |
|--------------------------------------|---------------------|----------|
| 8 9 $\frac{1}{2}$ h & ocul. γ | 33 34 $\frac{1}{2}$ | 10 20 |
| 8 11 | 33 34 $\frac{3}{4}$ | 9 40 |
| 8 12 | 33 34 $\frac{1}{2}$ | 9 30 |
| 8 15 $\frac{1}{2}$ Declin. h B. | 9 37 $\frac{1}{2}$ | 9 0 |
| altero | 9 38 | |

DIE 10 MARTIJ P. M.

Obseruabatur h hoc modo
iam appropinquans Soli.

| | |
|---|------|
| 7 ^H 51' Decl. 9 53 Bor. | |
| 7 56 Inter h 32 52 $\frac{1}{4}$, h Alt. 8 43 | |
| 7 59 $\frac{1}{2}$ & Aldeb. 32 52 $\frac{1}{2}$ | 8 15 |

Hinc poterit verificari locus h iam
Soli appropinquantis, sed habenda
ratio refractionis, pro latitudine vero
eius penitus exploranda accipies
eius distantiam a lucida \vee in hunc
modum, eo quod hæc in eadem cir-
citer eßet longitudine.

| | |
|-------------------|--------------------|
| 8 5 Distantia h & | 12 9 $\frac{1}{4}$ |
| lucidæ \vee | 12 11 dubiæ |
| 8 7 | 12 10 |

Lunæ præsentia peperit hanc va-
rietatem.

DIE 17 AUGUSTI A. M.

N.B. Obseruatio h in statione prima.

| | | | | | |
|---|------------------|-------------------------------|------------------------------------|---------------------|-----------------------------|
| 3 | 1 | 35 | Declinatio ♄ Bor. - 14 26 | | |
| | | | altero pinnac. 14 26 $\frac{1}{8}$ | | |
| | | | Caput ✓ or. | ♄ orient. | Dist. æquat. |
| 3 | 8 | 10 | 3 19 | 21 46 | 18 27 |
| 3 | 10 | 20 | 2 46 $\frac{1}{4}$ | 21 14 $\frac{1}{2}$ | 18 28 $\frac{1}{4}$ certior |
| 3 | 12 | 20 | 2 15 $\frac{1}{2}$ | 20 43 $\frac{1}{2}$ | 18 28 |
| 3 | 17 | ♄ & luc. ✓ | | | |
| | | | Distantia | | 18 58 |
| 3 | 18 | per Sext. | | | 18 58 |
| 3 | 20 | ♄ et Aldeb. | | | 17 58 $\frac{1}{2}$ |
| 3 | 21 | | | | 17 58 $\frac{1}{8}$ |
| 3 | 24 | Declin. ♄ | | | |
| | | | Bor. vno | | 14 26 |
| | | | altero pinn. | | 14 26 $\frac{1}{8}$ |
| 4 | 35 $\frac{1}{2}$ | Cum ♄ transfret per Merid. | | | |
| | | | habuit Alt. | | 48 31 |

Nota. Hæ obseruationes h iuxta
stationem sunt satis bonæ, quibus

potes tuto fidere, eratque satis altus,
quasi vna hora ante Meridianum.

DIE 18 AUGUSTI.

3^H 5' Ter obseruabatur per Sext. di-
stantia h ab Aldebora

17 57

17 57 $\frac{1}{4}$

17 57 $\frac{1}{2}$

3 12 Inter h & lucid. \vee I 18 58

II 18 58

III 18 57 $\frac{3}{4}$

3 16 Repetita h & Aldeb. 17 57 $\frac{1}{2}$

3 18 Repetita eadem 17 57 $\frac{1}{2}$

Atque hæc duæ sunt meliores &
præstant hesternis obseruationibus,
erat enim stationarius.

Pro examine Sextantis in omni-
bus his obseruationibus accipieba-
tur distantia inter Aldebora & luci-
dam \vee hoc modo

I 35 31 $\frac{1}{2}$

II 35 32

III 35 32

Patet itaque quod Sextans satis
bene se habeat.

3 29 Declin. h vno pinnac. 14 25 $\frac{1}{2}$

Repetita eadem 14 25 $\frac{1}{2}$

DIE 3 OCTOBRIS P. M.

| | |
|--------------------------------|---------------------|
| 9 25 Inter h & extrem. | 43 34 $\frac{1}{2}$ |
| 9 27 alæ Pegasi per | 43 34 $\frac{1}{2}$ |
| 9 29 Sext. vet. | 43 34 $\frac{1}{2}$ |
| 9 35 Inter h & oculum γ | 19 37 |
| 9 36 Eadem | 19 37 $\frac{1}{4}$ |
| 9 38 Repetita | 19 37 |
| 9 41 Declin. h Bor. | 13 50 |
| 9 43 | 13 50 |

DIE 22 OCTOBRIS.

Per Sextantem nouum.

| | |
|----------------------|---------------------|
| 10 46 P. M. h & | 42 14 |
| 10 48 extr. alæ | 42 14 |
| 10 50 Pegasi | 42 13 $\frac{5}{6}$ |
| 10 54 h & | 21 3 $\frac{1}{2}$ |
| 10 56 ocul. γ | 21 3 $\frac{1}{2}$ |
| 10 59 | 21 3 $\frac{1}{2}$ |
| 11 10 h et luc. | 16 47 $\frac{1}{2}$ |
| 11 12 \vee per | 16 47 $\frac{1}{2}$ |
| 11 13 Sext. nov. | 16 47 $\frac{1}{2}$ |

| | | |
|-------|-------------------------|--------|
| 11 17 | h Decl. per Arm. Austr. | 13 20½ |
| | Repetita eadem | 13 20½ |
| 12½ | Alt. h Mer. | |
| | per Q. Tych., nouo | 47 26½ |
| | vet. pinn. | 47 26½ |

DIE 23 OCTOBRIS.

h iuxta ♂ ☉

| | | |
|--------------------------------|------------------------|--------|
| 8 ^H 49 ^M | Dist. inter h et extr. | 42 9½ |
| 51 | alæ Peg. | 42 9½ |
| 59 | Inter h et lucid. V | 16 43½ |
| Per Sext. nouum inter nubes. | | |

DIE 3 NOUEMBRIS.

| | | |
|------|----------------------|------|
| 8 28 | Inter h et oculum ☿, | |
| | inter nubes | 22 1 |

DIE 11 NOUEMBRIS, VESPERI.

| | | |
|-------|-------------------|------------|
| H. 9¼ | Inter h & | 22 38¼ |
| | oculum ☿ | 22 37½ |
| | | 22 37½ bis |
| 9½ | Inter h & extrem. | 40 45 bis |
| | alæ Pegasi | 40 45½ |
| 9½ | h Declin. Bor. | 12 53 |
| | Repetita | 12 53¼ |

DIE 15 NOUEMBRIS P. M.

| | | |
|------|-----------------|-----------|
| 8 18 | P. M. Inter h & | 22 55¼ |
| 8 20 | oculum ☿ per | 22 55½ |
| 8 22 | Sext. vet. | 22 55¼ |
| 8 25 | Inter h & extr. | 40 29 |
| | alæ Peg. | 40 28½ |
| 8 32 | h Decl. Bor. | vno 12 48 |
| | altero | 12 49 |

DIE 16 NOUEMBRIS.

| | | |
|------|----------------|-----------|
| 5 32 | Inter h et | |
| | extr. alæ Peg. | 40 24 bis |
| 5 38 | Inter h et | |
| | bor. cornu ☿ | 32 18½ |
| | | 32 18¼ |

DIE 24 NOUEMBRIS.

| | | |
|-------|--------------------|------------|
| H. 6¼ | Inter h | |
| | et extr. Alæ Peg. | 39 55 |
| | per Sext. vet. | 39 54½ bis |
| 6½ | Inter h et ocul. ☿ | 23 32 bis |
| | Decl. h Bor. | 12 37 |

LOCA SATURNI¹.

Inuestigatio loci h ex obseruationibus die 9 Januarij habitis cum circa contactum Epicycli commutationis eßet ascendendo ad apogæum eiusdem.

| | | |
|------------|----------------------|-----------|
| H. 9 M. 42 | Dist. h | |
| | a boreali cornu ☿ | 51° 10½' |
| | Declin. h | 7 51 B. |
| | Declin. bor. corn. ☿ | 28 10 |
| | Afc. R. eiusdem | 75 4 |
| | Hinc Afc. R. h | 25 9 40'' |
| H. 10 M. 2 | Dist. æquat. h | |
| | a corde ☿ | 121 22 30 |
| | Afc. R. cord. ☿ | 146 33 40 |
| | Hinc Afc. R. h | 25 11 10 |

Pone igitur Hora 10 iuxta

æquale tempus

Ascensionem Rectam h 25 10 30

Declin. 7 51 B.

| | |
|-----------------|------------|
| Resp. Longitudo | 26 9½ V |
| Latitudo | 2 27 45 M. |

DIE 14 JANUARIJ.

| | |
|--------------------|--------------|
| Afc. recta h H. 4½ | 25° 18' 40'' |
| Declinatio | 7 56½ B. |
| Resp. Longitudo | 26 20½ V |
| Latitudo | 2 25 35 |

Postea replicato calculo et suppositis
Fixis ex veris locis prodit
locus h vt sequitur.

| | | |
|------------|----------------|------------|
| H. 5 M. 50 | Dist. h | |
| | ab Aldebora | 37° 41' ¾' |
| | Declin. h | 7 56½ B. |
| | Declin. Aldeb. | 15 36½ |

BA 82 3½

CA 74 23½

BC 37 41 45

BAC 37 45 20

¹ E codice V.

Afc. R. Aldeb. 63 4 40"
 Ergo Afc. R. $\frac{1}{2}$ 25 19 20
 H. 5 M. 0 Afc. R. $\frac{1}{2}$
 a lucida ∇ 346 28 $\frac{1}{4}$
 H. 4 M. 50 Angulus diff.
 ascenf. inter $\frac{1}{2}$ et $\frac{1}{2}$ 38 52
 Ergo hinc Afc. R. $\frac{1}{2}$ 25 20 15
 Itaque H. 5 $\frac{1}{2}$ limitata Afc. R. $\frac{1}{2}$ poni-
 tur 25° 19' 45". Declin. 7° 56 $\frac{1}{2}$ ' B.
 Resp. Longitudo 26° 21' 20" ∇
 Retine ab Aldebora.

Inquisitio Ascensionis rectæ $\frac{1}{2}$
 ex obseruationibus diei 5 Februarij
 pro $\frac{1}{2}$ stationaria.

H. 7 $\frac{1}{2}$ Dist. $\frac{1}{2}$ a lucida oculi $\frac{1}{2}$ 36° 13 $\frac{1}{2}$ '
 Declin. $\frac{1}{2}$ 8 34 $\frac{1}{2}$
 Declin. Aldeb. 15 36 $\frac{1}{2}$
 Angulus diff. ascenf. 36 23 $\frac{3}{4}$
 Afc. R. Aldeb. 63 4 45"
 Ergo Afc. R. $\frac{1}{2}$ 26 41 0

Supputatio loci $\frac{1}{2}$ ad diem 18 Augusti
 cum stationarius eſet.

H. 3 $\frac{1}{2}$ A. M. Dist. $\frac{1}{2}$
 ab Aldebora 17° 57 $\frac{1}{4}$ '
 Declin. $\frac{1}{2}$ 14 25 $\frac{1}{2}$
 Declin. Aldeb. 15 37
 Afc. R. eius 63 5 20"
 Ang. diff. ascenf. 18 33 0
 ad minimum

Ergo hinc Afc. R. $\frac{1}{2}$ 44 32 20
 H. 3 $\frac{1}{2}$ Dist. $\frac{1}{2}$ a luc. ∇ 18 58 $\frac{1}{4}$
 Afc. R. luc. ∇ 26 2
 Declin. luc. ∇ 21 29
 Ang. diff. ascenf. 18 32 $\frac{1}{3}$
 Ergo hinc Afc. R. $\frac{1}{2}$ 44 34 $\frac{1}{2}$
 Afc. R. $\frac{1}{2}$ limitata
 ad H. 3 44 33

Resp. Longitudo 16 18 $\frac{1}{2}$ $\frac{1}{2}$
 Latitudo 2 26
 Vel pone distantiam $\frac{1}{2}$ 17 57
 ab Ald. et a luc. ∇ 18 59

Prodit ex his longitudo $\frac{1}{2}$ 16 19 $\frac{1}{3}$ $\frac{1}{2}$

Si ſola lucida ∇ uſus fueris vtpote
 quæ minus radijs \ll inter obseruan-
 dum implicata, prouenit ex Afc. R.
 44 34 $\frac{1}{2}$ Longit. $\frac{1}{2}$ 16° 19' 50" $\frac{1}{2}$.

Inquisitio motuum apparentium $\frac{1}{2}$
 ex obseruationibus huius anni cum
 acronychius eſet circa \odot ^{lis} oppoſitum.

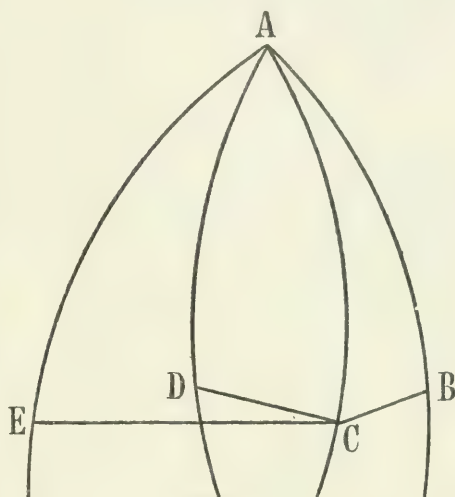
DIE 22 OCTOBRIS.

H. 10 M. 48 } Dist. { extr. alæ Peg. 42° 14'
 10 55 } $\frac{1}{2}$ { Aldebora 21 3 $\frac{1}{2}$
 11 12 } ab { Lucida ∇ 16 47 $\frac{1}{2}$

Declin. $\frac{1}{2}$ B. 13° 21'

Afc. R. { extr. alæ 358 1 40"
 { Aldeb. 63 5 $\frac{1}{4}$
 { Lucid. ∇ 26 2

Declin. { extr. alæ Peg. 12 53 $\frac{1}{2}$ B.
 { Aldeb. 15 37
 { Lucid. ∇ 21 29



| | |
|-----------------------|------------------------|
| EA 77 6 $\frac{1}{2}$ | DA 68 32 |
| CA 76 39 | CA 76 39 |
| EC 42 14 | DC 16 47 $\frac{1}{2}$ |
| EAC 43 25 7 | DAC 15 25 2 |
| 358 1 40 | 26 2 |
| Afc. R. 41 26 47 | 41 27 2 |

| | |
|-----------------------|-----------|
| BA 74 23 | BAC 21 38 |
| CA 76 39 | 63 5 15 |
| BC 21 3 $\frac{1}{2}$ | 41 27 15 |

Ergo H. 11 M. 0 Afc. R. $\frac{1}{2}$ limit. 41 27 0
 Declin. $\frac{1}{2}$ 13 21 B.
 Longitudo 13 7 4 $\frac{1}{2}$
 Latitudo 2 36 0 M.

Respectu ſequentis diei

potest eſe 13 6 30
 Hinc aufer 12 pro $\frac{1}{2}$ 12
 12 54 30

DIE 23 OCTOBRIS.

H. 8 M. 50 Dift. η ab extr. alæ Peg.Declin. η EA 77 $6\frac{1}{2}$ CA 76 $40\frac{1}{2}$

EC 42 9 20

EAC 43 20 15

358 1 40

41 21 55

Ergo Asc. R. η Resp. η Longitudo

Latitudo

42° 9 $\frac{1}{2}$ '13 19 $\frac{3}{4}$ B.ex proportione a
præcedente die

41 21 55

13 1 $\frac{3}{4}$ γ 2 35 $\frac{3}{4}$ M.

Supposito itaque loco quem ex obseruationibus die 22 Octob. adinuenimus, comperiebatur η in φ cum simplici \odot ^{lis} Mensis Octob. Die 24 H. 20 M. 30 P. M. in 12° 54 $\frac{3}{4}$ ' γ .

Ad hoc autem tempus habet

calculus { Copernic. 12 50 γ
Alphonf. 15 36 γ

 η motus diurnus inuentus est in Tab. 5' 8"

Si diem proxime antecedentem videlicet 23 Octobris in consilium adhibemus, veniunt pro tempore φ sequenti die subtrahenda exacte 7 $\frac{1}{2}$ minuta. Foret itaque longitudo η in φ \odot in

Accipe medium vtriusque

12 54 10 γ

12 54 30

DIE 3 NOUEMBRIS.

H. 8 M. 28 Dift. η ab AldeboraDeclin. η

BA 74 23

CA 76 57

BC 22 1

BAC 22 27 40

63 5 15

40 37 42

Ergo Asc. R. η

Resp. Longitudo

Latitudo

22° 1'

13 3 B.

per proportionem
inuenta

40 37 40"

12 14 $\frac{3}{4}$ γ

2 38 35

DIE 11 NOUEMBRIS.

H. 9 M. 15 Dift. η ab AldeboraDift. η ab extr. alæ Peg.Ergo H. 9 M. 20 Asc. R. η limitataDeclin. η

Resp. Longitudo

Latitudo

22 37 45

40 45

39 53 30

12 53 $\frac{1}{2}$ 11 31 40 γ

2 34 32

BA 74 23

CA 77 $6\frac{1}{2}$

BC 22 37 45

BAC 23 11

63 5 15

39 54 15

EA 77 $6\frac{1}{2}$ CA 77 $6\frac{1}{2}$

EC 40 45

EAC 41 51 5

358 1 40

39 52 45

OBSERVATIONES IOUIS.

DIE 6 JANUARIJ.

| | Aldeb. occid. | ☿ orient. | Dist. æquat. |
|---------------------|----------------------|-------------------|---------------------|
| 10 20 $\frac{1}{2}$ | 31 53 | 3 57 | 35 50 |
| 10 22 $\frac{3}{4}$ | 32 30 | 3 21 | 35 51 |
| 10 23 $\frac{5}{8}$ | 32 48 | 3 2 $\frac{1}{2}$ | 35 50 $\frac{1}{2}$ |
| 10 27 $\frac{1}{2}$ | 33 41 $\frac{1}{2}$ | 2 9 $\frac{1}{2}$ | 35 51 |
| 10 33 $\frac{1}{2}$ | Declin. ☿ vno pinn. | | 23 24 |
| | altero pinnac. | | 23 24 $\frac{1}{4}$ |
| 10 35 55 | Transiuit ☿ per Mer. | | |
| | in Alt. per volub. | | 57 29 $\frac{3}{4}$ |
| | per Q. Tychonicum, | | |
| | nouo | | 57 30 |
| | vet. | | 57 30 $\frac{1}{4}$ |

Postea a corde ☿
per Armillas maiores.

| | Cor ☿ or. | ☿ orient. | Dist. æquat. |
|---------------------|--------------------|--------------------|---------------------|
| 10 45 $\frac{2}{3}$ | 45 5 $\frac{1}{2}$ | 2 26 $\frac{1}{2}$ | 47 32 |
| 10 47 $\frac{2}{3}$ | 44 37 | 2 55 $\frac{1}{2}$ | 47 32 $\frac{1}{2}$ |
| 10 49 $\frac{2}{3}$ | 44 7 $\frac{1}{4}$ | 3 25 $\frac{3}{4}$ | 47 33 |
| 10 51 $\frac{1}{2}$ | 43 36 | 3 56 $\frac{1}{2}$ | 47 32 $\frac{1}{2}$ |

Pone itaque distantiam æquatoriam
☿ a corde ☿ P. 47 32 $\frac{1}{2}$
sine sensibili errore.

DIE 9 JANUARIJ P. M.

Observabatur ☿
cum vicinus esset meridiano.

| | | |
|----------|---|---------------------|
| 10 24 | Declin. ☿ | |
| | per Armill. maior. | 23 26 |
| | alt. pinnac. | 23 25 $\frac{1}{2}$ |
| 10 27 58 | Transiuit ☿ stella per Meridianum habens Alt. | |
| | per Quad. Volubil. | 57 31 |

DIE 10 JANUARIJ A. M.

| 2 59 Declin. ♄ Bor. | | | | | 23 26 | | |
|---------------------|------|-------------|-----------------|-----|-----------------|-------------|--|
| | | ♄ occid. | Cor ♄ occid. | | Dist. æquat. | Altit. ♄ | |
| 3 | 3½ | 69 5 | 21 | 5¼ | 47 59¾ | 31½ | |
| 3 | 5 9 | 69 29¼ | 21 | 29¾ | 47 59½ | | |
| 3 | 7 40 | 70 6½ | 22 | 7½ | 47 59 | 30¼ | |
| 3 | 10 0 | 70 42¾ | 22 | 42½ | 48 0¼ | | |

Pone distantiam æquatoriam ♄ a
corde ♄ circa 3 P. M. N. 47 59½

DIE 14 JANUARIJ P. M.

Post cœnam observabatur ☿ ante-
meridianus in hunc modum.

| | | |
|-------------------|------------------|---------------------|
| 7 54 | Inter ☿ & Aldeb. | 33 42 $\frac{1}{8}$ |
| 8 0 | per Sext. veter. | 33 42 $\frac{1}{2}$ |
| 8 3 $\frac{1}{2}$ | | 33 42 $\frac{1}{2}$ |
| 8 5 $\frac{1}{2}$ | | 33 42 $\frac{1}{2}$ |

Postea accipiebatur ☿ distantia ab
inferiori capite ☿ in hunc qui sequi-
tur modum.

| | | |
|---------|-------------------------|---------------------|
| 8 9 | Inter ☿ & infer. cap. ☿ | 12 5 |
| | Repetita | 12 4 $\frac{1}{2}$ |
| | Eadem | 12 4 |
| | Decl. ☿ Bor. per Arm. | |
| | utroque pinnac. | 23 27 |
| 10 5 50 | transiuit ☿ Merid. | |
| | in Alt. | 57 33 $\frac{1}{4}$ |

DIE 15 JANUARIJ, A. M.

☿ observabatur ob Refractionem a
Mer. cap. ☿.

| | | |
|--------------------|--------------|------------------------------------|
| 6 16 $\frac{5}{8}$ | ☿ & inf. | |
| | Cap. ☿ Dist. | 11 45 $\frac{1}{2}$, ☿ Altit. 3 0 |
| | ☿ Declin. | 23 43 $\frac{1}{2}$ |
| 6 20 $\frac{1}{2}$ | ☿ et inf. | |
| | ☿ cap. | 11 44 |
| | ☿ Declin. | 23 44 |

Debuit tunc esse 12 7 & 23 27, ergo
refractio distantiae M. 22 $\frac{1}{2}$ et declina-
tionis M. 16 $\frac{1}{2}$. N. B. Circa solstitium
maior refractio quam circa æqui-
noctia.

Post Meridiem

| | | |
|--------------------|----------------------------|---------------------|
| 4 2 | Declin. 23 29 | Altitudo 20 quasi |
| 4 27 $\frac{1}{2}$ | 23 29 | |
| | alt. 23 28 $\frac{1}{2}$ | |
| 6 1 $\frac{1}{2}$ | Dist. ☿ & Aldeb. | 33 37 $\frac{1}{2}$ |
| 6 3 | per Sext. Δ | 33 37 $\frac{3}{4}$ |
| 6 4 | | 33 37 $\frac{1}{2}$ |
| 6 7 | Decl. 23 27 $\frac{1}{4}$ | Alt. ☿ 37 20 |
| | altero 23 27 $\frac{1}{2}$ | |
| 6 12 | ☿ et infer. cap. ☿ | 12 7 $\frac{1}{4}$ |
| 6 13 | per Sext. Δ | 12 7 $\frac{1}{4}$ |

Tunc fuit Alt. $\frac{1}{2}$ 37 $\frac{1}{2}$ grad.

| | ꝥ orient. | Oculus or. | Diff. æquat. | Alt. ꝥ |
|-------------------------------|--|---------------|-----------------|-------------------------------------|
| 6 17 18 | 55 53½ | 21 10 | 34 43½ | } 38 20 |
| hæc minus certa | | | | |
| 6 19 25 | 55 23½ | 20 37 | 34 46½ | 38 30 |
| 6 20 56 | 55 0 | 20 14 | 34 46 | 38 40 |
| 6 21 51 | 54 46½ | 20 0¼ | 34 46¼ | } 39 0 |
| 6 22 56 | 54 30 | 19 43⅛ | 34 46⅝ | |
| 10 0 30 | Transiuit ꝥ per Meridianum et habuit Alt. per volub. 57 35½ | | | } minus certa per Muralem 57 33½ |
| 10 58 Declin. ꝥ Bor. | vno pinn. 23 27⅛ | | | |
| | altero 23 28 | | | |
| 11 5 Diff. inter ꝥ et ocul. ꝥ | | | | 33 35⅔ |
| | inter nubes. | | | |

DIE 16 JANUARIJ, P. M.

4 13 Declin. $\frac{1}{2}$ Bor.
vno 23 29
altero 23 29 $\frac{1}{3}$

Fuit tunc altitudo $\frac{1}{2}$ 21 30 circiter
4 39 Decl. $\frac{1}{2}$ 23 28 $\frac{1}{2}$
altero pinnac. 23 29

| | $\frac{1}{2}$ orient. | $\frac{1}{2}$ occid. | Diff. æquat. |
|--------------------|--------------------------|-------------------------|---------------------|
| 5 47 | 62 18 | 10 0 | 72 18 |
| 5 50 $\frac{3}{4}$ | 61 25 $\frac{1}{2}$ | 10 51 $\frac{1}{4}$ | 72 16 $\frac{3}{4}$ |
| 5 54 | 60 37 $\frac{3}{4}$ | 11 37 $\frac{1}{2}$ | 72 15 $\frac{1}{4}$ |

Non erat hic serenum, sed pone
diff. æquat. 72 18.

DIE 17 JANUARIJ, VESPERI.

4 58 Decl. $\frac{1}{2}$ Bor. 23 29 $\frac{3}{4}$ Altit. 28 $\frac{1}{4}$
Altero pinnac. 23 29

5 30 Fuit Decl. $\frac{1}{2}$ 23 29
23 29 $\frac{1}{2}$
Altit. $\frac{1}{2}$ 33 gradus

| | $\frac{1}{2}$ orient. | Oculus or. | Diff. æquat. |
|---------|--------------------------|---------------|---------------------|
| 5 43 57 | 61 44 $\frac{1}{4}$ | 27 10 | 34 34 $\frac{1}{4}$ |
| 5 55 10 | 58 59 $\frac{1}{2}$ | 24 24 | 34 35 $\frac{1}{2}$ |

Non erat satis serenum.

¹ Cf. infra inter observationes Veneris.

DIE 24 JANUARIJ P. M

4 33 $\frac{1}{4}$ Declin. $\frac{1}{2}$ Bor. 23 31 $\frac{1}{2}$
altero pinnac. 23 31 $\frac{1}{4}$
Altit. $\frac{1}{2}$ 29 $\frac{1}{4}$

4 58 Decl. vno
pinnac. 23 31 $\frac{1}{2}$
altero 23 31 $\frac{1}{4}$

Alt. $\frac{1}{2}$ 32 $\frac{3}{8}$

5 21 Poltea obser-
uabatur $\frac{1}{2}$ ab
Aldeboram

32 46 $\frac{1}{4}$ Satis bonæ
obseruatio-
nes et pone
distant. circa
hoc tempus

5 27 $\frac{1}{2}$ per Sex-

32 46 $\frac{1}{2}$

5 29 tantem

32 46 $\frac{1}{8}$

5 32

32 46 $\frac{1}{2}$

5 33 $\frac{1}{2}$

32 46 $\frac{1}{4}$

5 35

32 46 $\frac{1}{2}$

Poltea obseruabatur idem $\frac{1}{2}$ ab in-
feriori capite II per Sextantem

5 38 Inter $\frac{1}{2}$ Altit.
et Infer. 12 51 38 $\frac{1}{2}$

5 40 Cap. II 12 51 $\frac{1}{8}$ 39

5 42 12 51 $\frac{1}{4}$

5 48 Declin. $\frac{1}{2}$ Bor. 23 31

DIE 26 JANUARIJ P. M.¹

4 32 Decl. $\frac{1}{2}$ 23 30 Alt. $\frac{1}{2}$ 30

4 53 $\frac{1}{2}$ Decl. $\frac{1}{2}$ 23 31 $\frac{2}{3}$ 33 $\frac{1}{2}$

altero 23 31 $\frac{1}{3}$ hæc est melior
Pone veram antecedenti.
decl. 23 31 $\frac{1}{2}$

DIE 27 JANUARIJ¹.

4 56 $\frac{1}{2}$ Decl. $\frac{1}{2}$
vno 23 32 B.
altero 23 32 $\frac{1}{2}$ bona Alt. 34

$\frac{1}{2}$ orient. Oculus $\frac{1}{2}$ or.

6 33 38 38 $\frac{1}{2}$ 5 4 $\frac{1}{4}$ 33 33 $\frac{3}{4}$
6 34 $\frac{3}{4}$ 38 14 $\frac{1}{2}$ 4 41 $\frac{1}{4}$ 33 32 45

Pone itaque diff. æquat. 33 33

9 7 $\frac{1}{2}$ Transiit $\frac{1}{2}$ Meridianum & tunc
distabat lucida $\frac{1}{2}$ versus occa-
sum 70 48 $\frac{1}{4}$

Alt. $\frac{1}{2}$ in Merid. 57 38 $\frac{1}{8}$

DIE 30 JANUARIJ P. M.

Obferuabatur γ ab Aldeboram

| | Inter γ & Aldeb. | Declin. γ | Altit. γ |
|--------------------|----------------------------|--------------------------|--------------------|
| 5 14 | | 23 31 $\frac{3}{4}$ | 39 $\frac{1}{6}$ |
| | | alt. 23 32 $\frac{1}{2}$ | |
| 5 52 $\frac{1}{2}$ | 32 22 $\frac{1}{2}$ | 23 31 $\frac{2}{3}$ | 44 0 |
| 5 54 $\frac{1}{2}$ | 32 22 | 23 32 | 44 10 |
| 5 56 $\frac{1}{4}$ | 32 22 | 23 31 $\frac{1}{2}$ | 44 25 |

Postea obferuabatur γ ab inferiori capite II vt viceversa haberi potest per Sextantem.

| | | | |
|-------------------|---------------------|---------------------|-------|
| 5 59 | 13 15 | 23 31 $\frac{1}{2}$ | 44 35 |
| 6 0 | 13 15 $\frac{1}{4}$ | 23 32 | 44 50 |
| 6 2 | 13 15 $\frac{1}{4}$ | 23 31 $\frac{3}{4}$ | 45 0 |
| 6 3 $\frac{1}{2}$ | 13 15 | 23 31 $\frac{3}{4}$ | 45 10 |

Per Sextantem nouum fequentia. Hora 6 M. 12 pro examine sextantis veteris per quem omnes anteceden-tes obferuationes capiebantur, obferuabatur vera distantia γ et Aldeboram 32 21. Inter γ & oculum γ

per Sext. nouum 36 42
repetita eadem 36 41 $\frac{5}{8}$

Patet itaque obferuationes per Sextantes recte se habere, siquidem ambo in vnum fere conueniunt, sed fidas potius sextanti veteri siquidem is fuit bene ad fixas prius verificatus.

Inter Aldeboram & lucidam γ per Sext. nou. 35 32, quod etiam satis bene conuenit experimentandi causa.

Pro verificatione horologij, si opus fuerit (nam per se bene mouebatur his diebus), obferuabatur quod Aldeboram transfiret Meridianum H. 6 M. 39 $\frac{5}{8}$ habens alt.

per Volubilem 49 42

Tychonicum 49 41 $\frac{5}{8}$

DIE 17 FEBRUARIJ P. M.

5^H 58 $\frac{1}{2}$ Declin. γ B. 23 34 $\frac{3}{4}$ Alt. 52 $\frac{1}{6}$

Postea obferuabatur γ hoc modo

| | Luc. γ occid. | γ orient. | Dist. æquat. |
|--------------------|----------------------|---------------------|---------------------|
| 6 31 $\frac{1}{2}$ | 51 59 $\frac{1}{2}$ | 17 39 $\frac{1}{4}$ | 69 38 $\frac{3}{4}$ |
| 6 34 | 52 35 | 17 2 $\frac{1}{2}$ | 69 37 $\frac{1}{2}$ |
| 6 37 | 53 17 $\frac{3}{8}$ | 16 23 | 69 40 $\frac{3}{8}$ |
| 6 40 | 53 57 $\frac{1}{2}$ | 15 40 $\frac{1}{4}$ | 69 37 $\frac{3}{4}$ |

Cor γ or. γ orient. Dist. æquat.

| | | | |
|-------------------|--------------------------|---------------------|---------------------|
| 9 17 25 | 26 55 $\frac{1}{2}$ | 23 47 $\frac{1}{4}$ | 50 42 $\frac{3}{4}$ |
| 9 19 20 | 26 28 $\frac{3}{4}$ | 24 15 | 50 43 $\frac{3}{4}$ |
| 9 21 10 | 26 1 $\frac{3}{4}$ | 24 41 | 50 42 $\frac{3}{4}$ |
| 9 23 55 | 25 22 | 25 21 | 50 43 |
| 9 6 $\frac{1}{2}$ | Declinatio γ Bor. | | 23 36 |

Horolog. in seq. Meridie a præcedente duobus min. celerius iusto mouebatur.

DIE 18 FEBRUARIJ.

| | |
|----------------------------------|-------------------------------------|
| 6 25 γ & Aldeb. per Sext. | 31 44 |
| 6 27 | 31 43 $\frac{1}{2}$ |
| 6 29 | 31 43 $\frac{3}{4}$ |
| 6 32 Declinatio γ | vno 23 35 |
| | altero pinn. 23 35 $\frac{1}{2}$ B. |

Examinatio obferuationum γ
pro loco γ .

DIE 9 JANUARIJ.

| | |
|--|-----------------------|
| 10 ^H 28' γ in Merid. hab. Alt. | 57 31 0 |
| | 34 5 20 |
| Declinatio γ B. | 23 25 40 |
| 3 0 P. M. N. diff. a corde γ | 47 59 $\frac{1}{2}$ |
| Ascens. R. Cordis γ | 146 33 45 |
| Ascens. R. γ | 98 34 15 |
| Declinatio γ Bor. | 23 26 |
| Resp. Longitudo | 7 51 46 $\frac{1}{2}$ |
| Latitudo | 0 9 0 B. |

DIE 14 JANUARIJ.

| | |
|--|---------------------|
| 8 ^H 5 ^M Inter γ et ocul. γ | |
| per Sext. | 33 42 $\frac{1}{2}$ |
| 10 in Merid. | 57 33 45 |
| Declinatio | 23 28 25 |
| H. 8 per Armillas | 23 27 |
| | 23 27 $\frac{1}{2}$ |
| Diff. Ascens. | 34 52 54 |
| Asc. R. γ | 97 57 34 |

Die eodem

| | |
|------------------------------|--------------------|
| 8 9 Inter γ et infer. | |
| caput II | 12 4 $\frac{1}{2}$ |
| Declin. infer. cap. II | 28 56 40 |
| Declin. γ vt prius | 23 27 |
| Diff. Ascens. | 11 59 55 |
| Ascens. R. Capitis II | 109 58 45 |
| Ascens. R. γ | 97 58 50 |
| Ponatur Ascens. | 97 58 20 |
| Declinatio B. | 23 27 0 |

| | |
|---------------------|-----------------------|
| <i>Pone declin.</i> | 23 28 |
| Resp. Longitudo | 7 18 55 ⁶⁶ |
| Latitudo | 0 8 3B. |

DIE 15 JANUARIJ.

| | | |
|-------|----------------------------|-----------------------------------|
| 6 1 | Inter ♃ et oculum ♄ | 33 37 ¹ / ₂ |
| | Declin. per Armillas | 23 27 ¹ / ₄ |
| H. 10 | fuit in Merid. | 57 33 ¹ / ₂ |
| | | 34 5 20 |
| | | 23 28 10 |
| | Ad H. 6 pone | 23 27 ¹ / ₂ |
| | Diff. ascenf. | 34 47 36 |
| | Ascenf. R. ♃ | 97 52 16 |
| 6 23 | Dist. æquator. | 34 46 50 |
| | Ascenf. R. oculi ♄ | 63 4 40 |
| | Ascenf. R. ♃ | 97 51 30 |
| | Diurnus ♃ 4 ^m . | |
| 6 12 | Inter ♃ et | |
| | infer. cap. ♄ | 12 7 ¹ / ₄ |
| | Pone H. 6 M. 10 | |
| | Ascenf. ♃ | 97 53 |
| | Declin. B. | 23 27 ¹ / ₂ |
| | Diff. ascenf. | 12 3 30 |
| | Asc. R. ♃ | |
| | (hæc minus bona) | 97 55 15 |
| | Resp. Longitudo | 7 14 5 ⁶⁶ |
| | Latitudo | 0 8 6B. |

DIE 2 MARTIJ P. M.

| | | |
|---------------------------------|---------------|--------------------------------------|
| 7 ^H 48 ^M | Inter ♃ | 31 54 ¹ / ₄ |
| 7 50 | et Aldeb. | 31 54 ¹ / ₃ |
| 7 54 | Declin. ♃ | 23 36 ¹ / ₄ B. |
| 7 59 | Inter ♃ et | 13 39 |
| 8 0 | Infer. cap. ♄ | 13 39 |
| 8 2 ¹ / ₂ | Declin. | 23 36, |
| | altero | 23 35 ¹ / ₄ |

Atque hinc poterit exacte verificari locus ♃ pro ipsius constitutione iuxta quadraturam solis, et vice versa comprobari, erat enim ♃ locus inter has binas stellas, Aldeboram et infer. cap. ♄.

DIE 4 MARTIJ P. M.

| | | | |
|----------------------------------|------------|--------------------------------------|-------------------------------------|
| 8 49 | Declin. | 23 36 ¹ / ₂ B. | Alt. 50 ¹ / ₂ |
| 8 55 | Inter ♃ et | 32 4 ³ / ₄ | |
| 8 56 ¹ / ₂ | oculum ♄ | 32 4 ³ / ₈ | |
| 8 57 ¹ / ₂ | | 32 4 ¹ / ₄ | |

| | | | |
|---------------------------------|--------------|-----------------------------------|---------|
| 9 3 ¹ / ₈ | Inter ♃ et | 48 33 ¹ / ₈ | |
| 9 4 | Cor ♄ | 48 33 ¹ / ₈ | |
| 9 5 | | 48 33 ¹ / ₈ | |
| 9 8 | Declinatio ♃ | 23 36 ¹ / ₂ | Alt. 48 |
| | alt. pinn. | 23 36 ³ / ₄ | |

DIE 5 MARTIJ P. M.

Nota. ♃ & canis major tranſibant Meridianum ſimul hoc veſperi, habuitque ♃ altitudinem meridianam 57 11.

DIE 10 MARTIJ P. M.

6 27¹/₈ Tranſiuit ♃ per Meridianum habens Altit. Max. per Volub. 57 43

Locus ♃ poſtea¹ reſtituebatur hoc modo, ut hinc locus ♄ deriuari poſſit.

| | | | |
|------|-----------|-----------------------------------|--|
| 8 12 | Declin. ♃ | 23 37 B. | |
| 8 19 | Inter ♃ | | |
| | & Aldeb. | 32 17 | |
| 8 21 | | 32 16 ⁵ / ₈ | |
| 8 22 | | 32 17 | |
| 8 25 | Inter ♃ | | |
| | & cor ♄ | 48 17 ¹ / ₂ | |
| 8 26 | | 48 17 | |
| 8 27 | | 48 17 ¹ / ₂ | |

Per
Sext.
△

DIE 27 MARTIJ.

| | | |
|------|-----------------|-----------------------------------|
| 9 47 | ♃ Declinatio B. | 23 34 ¹ / ₂ |
| 9 50 | ♃ a corde ♄ | 46 47 |
| 9 51 | | 46 47 ¹ / ₄ |
| 9 52 | | 46 47 |

DIE 5 APRILIS P. M.

| | | | |
|----------------------------------|-----------|--|--|
| 8 13 ¹ / ₂ | Declin. ♃ | 23 29 ⁵ / ₈ Bor. | |
| 8 17 ¹ / ₂ | Inter ♃ | 45 45 ¹ / ₂ | |
| 8 20 | & cor. ♄ | 45 45 ⁵ / ₈ | |
| 8 21 | | 45 45 ⁵ / ₈ | |
| 8 26 | Inter ♃ | | |
| | & lucid. | 22 4 ¹ / ₂ | |
| 8 27 | cornu ♄ | 22 5 | |
| 8 28 | | 22 4 ³ / ₈ | |
| 8 29 | | 22 5 | |
| 8 31 | Declin. ♃ | 23 29 ⁵ / ₈ | |

Per
Sext.
vet.

¹ Id est, poſt meſuras diſtantiæ æquatoriæ ♄ et ♃, de quibus vide ſupra inter obſervationes Lunæ.

DIE 5 APRILIS¹.

H. 8 M. 22 $\frac{3}{4}$ Dist. inter ♄
 et cor ♀ 45° 45 $\frac{2}{3}$
 Declin. ♄ 23 30 B.
 Declin. cordis ♀ 13 58
 Asc. R. cordis ♀ 146 33 $\frac{1}{6}$
 Viceversa

H. 8 M. 27 $\frac{3}{4}$ Dist. ♄ a boreo 22 4 $\frac{2}{3}$
 cornu ♀ limit.
 Decl. bor. cornu ♀ 28 11 B.
 Asc. R. eiusdem 75 11

 BA 61 49 | DA 76 2
 CA 66 30 | CA 66 30
 BC 22 4 $\frac{2}{3}$ | DC 45 45 $\frac{2}{3}$
 BAC 24 1 $\frac{1}{6}$ | DAC 47 27

Ergo H. 8 M. 27 $\frac{3}{4}$ Asc. R. ♄
 a boreo cornu ♀ 99 8 $\frac{1}{6}$

Ergo H. 8 M. 22 $\frac{3}{4}$ Asc. R.
 a corde ♀ 99 8 $\frac{1}{6}$

Igitur H. 8 M. 25 tanquam ad tempus
 intermedium 99° 8' 10".

Declinatio 23° 29 $\frac{5}{6}$ ' præcife.

DIE 7 APRILIS.

8 7 Declin. ♄ 23 29 $\frac{1}{2}$
 8 12 ♄ & Cor ♀ 45 30 $\frac{1}{2}$
 8 13 45 30 $\frac{1}{2}$
 8 14 $\frac{1}{2}$ 45 30 $\frac{1}{2}$

DIE 17 AUGUSTI A. M.²

Postea obserubantur ♄ & ♀ qui ad-
 modum erant propinqui, in hunc qui
 sequitur modum.

3^h 30 Declin. ♄ 19 36 $\frac{1}{2}$
 3 32 19 36 $\frac{1}{2}$

♀ erat paulo occidentalior,
 latitudo fere eadem.

3 44 Inter ♄ & 22 23 $\frac{1}{2}$
 3 46 Bor. Cap. ♀ 22 23 $\frac{1}{2}$
 3 48 22 23 $\frac{1}{2}$

Altitudo eorum tunc 15 G. proxime.
 3 53 Declin. ♄ 19 36 $\frac{1}{2}$ B.

DIE 18 AUGUSTI A. M.

3 33 $\frac{1}{2}$ Declin. ♄ 19 34 Alt. 11 26
 3 37 alt. pinnacid. 19 33 11 55
 3 43 ♄ & infer. 18 32 $\frac{1}{2}$
 3 45 Cap. ♀ 18 32 $\frac{1}{2}$
 3 49 $\frac{1}{2}$ 18 32 $\frac{3}{4}$
 4 12 Declin. ♄ 19 32 17
 4 36 19 32

DIE 30 NOUEMBRIS A. M.

6 12 Inter ♄ & cor ♀ 6 50 $\frac{1}{6}$ ter
 6 20 Inter ♄ & inf. cap. ♀ 30 14 $\frac{1}{4}$
 6 21 Decl. ♄ Bor. 16 25
 Inter nubes.

OBSERUATIONES MARTIS.

DIE 1 JANUARIJ A. M.

7^h 8' Declin. ♂
 per Armill. subt. 2 11 $\frac{1}{2}$ Bor.
 altero pinnacidio 2 12 $\frac{1}{2}$
 7 20 17 ♂ occid. Arcturus occ. Dist. æquat.
 40 2 13 3 26 59

Plures obseruationes propter nubes
 ab occasu oriundas hoc tempore ma-
 tutino facere non licuit.

N. B. Horologium circa H. 7 verifi-
 catum est.

DIE 6 JANUARIJ.

Nota. ♂ circa H. 12 Noctis dista-
 bat a stellula tertiæ magnitudinis in
 ala ♄ cui proxime applicabat eius-
 dem latitudinis fere (estque hæc stella
 lucidior earum quæ sunt in Meridi-
 onali ala ♄ e regione cinguli) idque
 per Radium G. 1 M. 56, existens hæc
 ipsa stella occidentalior et illi appro-
 pinquans. Postea reiterata obserua-
 tione 1.52 min. sed minus stricte,

¹ E codice V.

² Cfr. obf. conjunctionis ♄ et ♀ infra inter obseruationes Veneris.

fit itaque vera per Radium distantia
1⁵ 54^M.

DIE 9 JANUARIJ A. M.

| | ♂ occid. | Spica ♄ occ. | Diff. æquat. |
|----------------------------------|-----------------------------------|----------------------------------|------------------------------------|
| 5 47 20 | 23 49 | 11 51 | 11 58 |
| 5 59 ³ / ₄ | 25 59 ¹ / ₂ | 14 1 ¹ / ₅ | 11 58 ¹ / ₁₀ |
| 6 3 ¹ / ₂ | 27 54 ¹ / ₂ | 15 57 | 11 57 ¹ / ₂ |

Pone itaque differentiam ascensionalem ♄ Spicæ & ♂ 11 58

| | | |
|-------------------|--------------|----------------------------------|
| 6 35 56 Declin. ♂ | vno | 1 39 ¹ / ₂ |
| | altero pinn. | 1 39 ⁵ / ₆ |

| | ♂ occid. | Arcturus occ. | Diff. Asc. |
|---------|-----------------------------------|-----------------------------------|------------|
| 7 19 39 | 46 55 ¹ / ₂ | 21 37 ¹ / ₂ | 25 18 |

DIE 10 JANUARIJ, MANE.

| | |
|---------------------------|--|
| 4 9 10 ♂ in Merid. habuit | |
| | Alt. 35 39 ¹ / ₂ |

Per Sext. Δ veterem

| | | |
|--|-----------------------------------|-----------|
| 5 6 Diff. inter ♂ & | 39 4 | |
| 5 9 cor ♄ | 39 5 ¹ / ₂ | |
| 5 11 | 39 5 ³ / ₄ | } Bonæ |
| 5 13 | 39 5 ³ / ₄ | |
| 5 15 ♂ Decl. Bor. | 1 35 | bis, bona |
| 5 17 ¹ / ₂ Inter ♂ & | 15 48 ¹ / ₂ | |
| 5 19 Spicam ♄ | 15 49 | |
| 5 22 per Sext. | 15 48 | |
| 5 25 | 15 48 | |

Pone distantiam 15 48¹/₂

Horologium in meridie sequente satis bene se habuit, nam licet non fuerit in ipso meridie serenum, tamen paulo post Meridiem cum Solis medium per pinnacidia quadrantis videretur in Azimuto vno versus occasum, monstravit horologium minuta 3¹/₂ a meridie elapsa, quod fere conuenit. Permissi autem horologio suam reuolutionem, vt ex sequentibus obseruationibus cum serenius cælum fuerit examinari queat.

DIE 11 JANUARIJ.

Vidi mane quod Mars admodum partiliter applicaret stellæ tertiæ in ala meridionali ♄, habens eandem fere latitudinem.

6^H 0' Inter ♂ et tertiam in ala austr.
♄ quæ est Virgini juxta cingulum per Radium 1 2

6 10 Eadem repetita 1 2¹/₈

6 14 Ead. repet. per Radium 1 2¹/₂

6 29 Eadem Per 1 6¹/₄

6 31 Repetita Sextant. 1 6

Eadem 1 7

Pone hic dist. ♂ & 3 alæ 1 6³/₄

6 39 Inter ♂ & Spicam 15 37¹/₆

6 41 ♄ per Sextant. 15 37¹/₄

6 45 Tertio repetita 15 36⁵/₈

Pone dist. ♂

& Spicæ exacte 15 37

6 48 Declin. 1 31 Bor.,

1 31¹/₄ dubia

Fuit tunc altitudo ♂ 26

Declinatio eius parua

in ♄ juxta Martem 0 51 B

Decl. eiusdem quæ est

tertia in ala ♄ alt. pin. 0 50

Pone declin. huius 0 50¹/₂

Fuit autem alt. ♂ Merid.

per Quadr. Tycho.

35 40 vno pinnac.

35 40¹/₈ altero

Hinc prouenit declin. ♂ 1 34¹/₂

atque huic potius fidendum.

Postea obseruabatur ♂ et Arcturus non solum propter Martem sed etiam propter tempus ad Solem in Meridie applicandum.

| | ♂ occid. | Arctur. occ. | Diff. æquat. | Alt. ♂ |
|---------|-----------------------------------|-----------------------------------|-----------------------------------|--------------------------------|
| 7 22 45 | 49 2 ¹ / ₂ | 24 4 ³ / ₄ | 24 57 ³ / ₄ | 23 ¹ / ₃ |
| 7 24 22 | 49 27 | 24 30 | 24 57 | 23 |
| 7 28 34 | 50 29 ⁵ / ₆ | 25 33 ¹ / ₂ | 24 56 ¹ / ₃ | 22 ¹ / ₂ |
| 7 30 52 | 51 3 ¹ / ₆ | 26 8 | 24 55 ¹ / ₆ | 22 |
| 7 32 46 | 51 30 | 26 34 | 24 56 | 21 ² / ₃ |
| 7 34 10 | 51 51 | 26 55 ¹ / ₂ | 24 55 ¹ / ₂ | 21 ¹ / ₂ |

Pone dist. æquat. 24 56

& insensibiliter aberrabis.

7 35 50 Arcturus occ. 27 19

7 36 50 27 34¹/₄

7 37 42 27 46¹/₂

7 38 31 27 59

| | |
|---------|---------------------|
| 7 39 55 | 28 18 $\frac{1}{4}$ |
| 7 40 58 | 28 33 $\frac{1}{6}$ |
| 7 41 49 | 28 45 $\frac{1}{3}$ |
| 7 42 41 | 28 59 |
| 7 43 45 | 29 15 |
| 7 45 3 | 29 34 $\frac{1}{2}$ |
| 7 46 21 | 29 54 $\frac{3}{4}$ |

Horologium in meridie 4 M. 4 S. iusto celerius ibat, isque error illi spatio duorum dierum contigit a Meridie diej 9, sed Sol videbatur per rimulas, nam non poterat illucescere, sed in ipso momento index in 12^H0' 0'' collocabatur.

DIE 14 JANUARIJ.

N.B. Hæc tempora sunt corrigenda. H. 7 44 $\frac{1}{2}$ Declin. ♂ B.

vno pinn. 1 26
alt. pinn. 1 25 $\frac{1}{2}$

♂ occid. Arctur. occ. Dist. æquat.

| | | | |
|--------------------|---------------------|---------------------|---------------------|
| 7 50 $\frac{1}{2}$ | 50 39 | 26 12 | 24 27 |
| 7 51 54 | 50 57 $\frac{1}{2}$ | 26 29 | 24 28 $\frac{1}{2}$ |
| 7 53 30 | 51 21 $\frac{1}{2}$ | 26 53 $\frac{1}{2}$ | 24 28 |
| 7 54 52 | 51 41 $\frac{3}{4}$ | 27 13 | 24 28 $\frac{3}{4}$ |
| 7 56 40 | 52 7 $\frac{3}{4}$ | 27 40 | 24 27 $\frac{3}{4}$ |
| 7 58 24 | 52 33 $\frac{1}{2}$ | 28 5 | 24 28 $\frac{1}{2}$ |

Pone itaque diff. asc. ♂

& Arcturi 24 28

8 0 Repetita Declin. ♂ Bor.

vno 1 26
altero 1 25 $\frac{1}{2}$

Mars admodum prope erat stellæ tertiæ in ala Merid. ♄ distans ab ea vix ad diametrum lunarem.

Ex præcedentibus etiam verificetur horologium.

DIE 15 JANUARIJ, MANE.

3 52 1 Transiuit ♂ Merid.
in Alt. per Volub. 35 28 $\frac{3}{4}$

| | |
|---------------------------|---------------------|
| 4 0 Inter ♂ & | 39 52 $\frac{3}{4}$ |
| 4 3 cor ♄ per | 39 52 $\frac{1}{2}$ |
| 4 6 $\frac{1}{2}$ Sextan- | 39 52 $\frac{1}{2}$ |
| 4 8 tem Δ | 39 52 $\frac{1}{2}$ |

4 36 10 Transiuit Spica ♄ per Merid.,
hinc potest Horologium verificari.

| | |
|-----------------------------|--------------------|
| 4 40 Dist. inter | 15 4 |
| 4 41 $\frac{1}{2}$ ♂ & | 15 4 $\frac{1}{6}$ |
| 4 42 $\frac{1}{3}$ Spicam ♄ | 15 4 $\frac{1}{6}$ |
| 4 45 Declin. ♂ Bor. vno | 1 23 $\frac{1}{2}$ |
| altero | 1 23 |

♂ occid. Spica ♄ occ. Dist. æquat.

| | | | |
|--------|---------------------|--------------------|--------------------|
| 4 57 2 | 16 10 | 5 8 | 11 2 |
| 5 0 7 | 16 56 $\frac{1}{6}$ | 5 54 | 11 2 $\frac{1}{2}$ |
| 5 1 52 | 17 20 $\frac{3}{4}$ | 6 18 | 11 2 $\frac{3}{4}$ |
| 5 3 13 | 17 41 | 6 38 $\frac{1}{2}$ | 11 2 $\frac{1}{2}$ |
| 5 5 1 | 18 9 $\frac{1}{2}$ | 7 6 | 11 3 $\frac{1}{2}$ |
| 5 7 0 | 18 40 $\frac{1}{2}$ | 7 38 | 11 2 $\frac{1}{2}$ |
| 5 8 25 | 19 2 $\frac{3}{4}$ | 7 59 $\frac{3}{4}$ | 11 3 |

Pone dist. æquat. ♂ et Spicæ ♄
circa Hor. 5 11 2 $\frac{3}{8}$

5 22 Obseruabatur distantia inter tertiam in Austr. ala ♄ quæ est sub cingulo & ♂ per Sextant. Trigon. 0 grad. 30 min. Semel tantum propter nubes exortas. Fuit autem ♂ fere in eadem linea recta cum dicta stella.

DIE 16 JANUARIJ, A. M.

H. 3 $\frac{5}{8}$ fuit Altitudo ♂ Merid. 35 $\frac{5}{8}$ 26 $\frac{1}{2}$ ' sed non tunc temporis erat fatis serenorum. Pone altit. ♂ 35 26

3 57 fuit dist. inter ♂
et ♄ Spicam 14 59
estque hæc distant. obseruata inter densiores nubes.

4 51 Declinatio ♂ 1 $\frac{5}{8}$ 21' B vnico pinnacido, inter nubes obseruata.

DIE 24 JANUARIJ.

H. 6 28' Mane Mars erat prætergreßus paruum illam stellam ♄ quæ est tertia alæ meridionalioris & distabat ab ea borealior aliquantulum exiltens per Sextantem 0 $\frac{5}{8}$ 38', idque in ea linea recta quæ ducitur a parua illa ♄ in suram bootis antecedentem arcturum Hinc poterit colligi locus ♂.

DIE 26 JANUARIJ, MANE.

4 28 Declin. ♂ B. vno pinn. 1 16 $\frac{1}{2}$
altero 1 16

| | Cor Ω occ. | \odot occid. | Diff. æquat. |
|---------|---------------------|---------------------|--------------------|
| 4 40 7 | 63 55 | 24 48 $\frac{1}{2}$ | 39 6 $\frac{1}{2}$ |
| 4 42 37 | 64 33 $\frac{1}{2}$ | 25 27 $\frac{1}{2}$ | 39 6 |
| 4 44 31 | 65 8 $\frac{1}{2}$ | 26 2 | 39 6 $\frac{1}{2}$ |
| 4 47 19 | 65 46 | 26 38 $\frac{3}{4}$ | 39 7 $\frac{1}{4}$ |
| 4 49 5 | 66 12 | 27 4 $\frac{1}{2}$ | 39 7 $\frac{1}{2}$ |
| 4 53 38 | 67 21 | 28 14 | 39 7 |
| 4 55 5 | 67 44 | 28 36 $\frac{1}{2}$ | 39 7 $\frac{1}{2}$ |
| 4 57 35 | 68 22 | 29 15 | 39 7 |

Pone circa horam 5 dist. æquat. \odot
a corde Ω 39 7

6 8 Declin. \odot B. vno 1 16 $\frac{1}{2}$
altero pinn. 1 16

| | \odot occ. | Spica Π occ. | |
|---------|---------------------|---------------------|---------------------|
| 6 11 3 | 47 44 | 37 31 $\frac{1}{4}$ | 10 12 $\frac{3}{4}$ |
| 6 12 56 | 48 13 $\frac{1}{2}$ | 38 0 $\frac{1}{2}$ | 10 13 |
| 6 14 24 | 48 36 $\frac{5}{8}$ | 38 24 | 10 12 $\frac{5}{8}$ |
| 6 16 3 | 49 0 $\frac{1}{2}$ | 38 48 $\frac{3}{4}$ | 10 12 |

Horologium in Merid. 10 M. 50 S.
iusto tardius ibat, qui error illi duo-
rum dierum spatio contigit.

Nota. \odot hoc die erat iuxta stationem primam, ita vt nihil moueretur iuxta calculum Alphonsi a die 23 vsque in 27, exacte vero hoc die 26 ponebatur signum R. stationis incipiente retrogradatione iuxta Ephemerides Cypriani. Iuxta Ephemerides vero tam Mæstlini quam Magini, Mars primum fit stationarius die 28.

DIE 28 JANUARIJ, MANE.

4^h25' Decl. \odot Bor. vno pinn. 1 19
altero pinn. 1 18 $\frac{1}{2}$

| | Cor Ω occ. | \odot occ. | Diff. æquat. |
|--------------------|------------------------------------|---------------------|--------------------|
| 4 33 | 62 1 | 22 55 | 39 6 |
| 4 34 $\frac{5}{6}$ | 62 32 $\frac{1}{3}$ | 23 26 | 39 6 $\frac{1}{3}$ |
| 4 38 $\frac{1}{2}$ | 63 20 | 24 13 $\frac{1}{4}$ | 39 6 $\frac{3}{4}$ |
| 4 40 $\frac{2}{3}$ | 63 56 | 24 49 $\frac{1}{4}$ | 39 6 $\frac{3}{4}$ |
| 5 1 $\frac{1}{6}$ | 69 9 $\frac{1}{4}$ | 30 2 $\frac{1}{2}$ | 39 6 $\frac{3}{4}$ |
| 5 3 $\frac{1}{3}$ | 69 39 | 30 32 | 39 7 |
| 5 5 | 70 9 $\frac{1}{2}$ | 31 3 | 39 6 $\frac{1}{2}$ |
| 5 10 | Repetita declin. \odot Bor. 1 19 | | |

Apparet itaque Martem circa hoc præcise tempus esse stationarium, siquidem eandem quam supra die 26 retinuit a corde Ω dist. æquatoriam 39 6 $\frac{1}{2}$

Horolog. in Meridie sequente saltem vno minuto & 5 secundis iusto tardius mouebatur.

DIE 29 JANUARIJ, MANE.

5 12 $\frac{2}{3}$ Declinatio \odot Bor.

per Armillas 1 21 $\frac{1}{2}$. Altit. 25 30

| | \odot occid. | Spica Π occ. | Diff. æquat. |
|---------|---------------------|---------------------|---------------------|
| 5 46 10 | 41 37 | 31 24 $\frac{1}{2}$ | 10 12 $\frac{1}{2}$ |
| 5 49 47 | 42 32 $\frac{1}{2}$ | 32 21 | 10 11 $\frac{1}{2}$ |
| 5 51 33 | 43 2 $\frac{1}{2}$ | 32 50 | 10 12 $\frac{1}{2}$ |
| 6 8 22 | 47 15 $\frac{1}{2}$ | 37 3 $\frac{1}{3}$ | 10 12 $\frac{5}{6}$ |
| 6 11 23 | 47 58 $\frac{3}{4}$ | 37 46 $\frac{1}{2}$ | 10 12 $\frac{1}{4}$ |

Altit. 23 30

6 14 . . Repetita decl. \odot Bor. 1 21 $\frac{1}{2}$

*Nota.*¹ Ante triduum fuit eadem distantia Martis a Spica, nisi quod $\frac{1}{2}$ scrupulo maior fere videbatur, quare Mars hilce diebus stationarius.

Pro loco \odot .

DIE 9 JANUARIJ.

6 0 Dist. æquat. \odot a Spica 11 58 0
Ascens. R. Spicæ 195 52 50
Ascens. R. \odot 183 54 50
Declin. \odot 1 39 $\frac{3}{4}$ B.

7 20 Dist. æquat. \odot
ab Arcturo 25 18
semel tantum

Ascens. R. Arcturi 209 13
Ascens. R. \odot 183 55
Declinatio B. 1 39 $\frac{3}{4}$

DIE 10 JANUARIJ, MANE.

4 9 Altit. \odot Merid.
per Tychon. 35 40 0 35 39 30
Decl. ex Alt. 1 34 40 1 34 10

5 15 per Armillas 1 35 B.

5 6 Dist. inter \odot et cor Ω 39 5 $\frac{3}{4}$
Declin. \odot B. 1 34 $\frac{1}{2}$
Declin. cordis Ω B. 13 57 $\frac{2}{3}$
Diff. Ascens. 37 31 4
Asc. R. cordis Ω 146 33 45
Asc. R. \odot 184 4 49

5 17 Inter \odot et Spicam 15 48 $\frac{1}{3}$
Diff. ascens. 11 50 8
Asc. R. \odot 184 2 42
Declin. Bor. 1 34 30
Asc. R. \odot limit. 184 3 50

¹ In margine postea adscripta.

Resp. Longitudo 3 5 57 Ω
 Latitudo 3 3 43 B.

DIE 14 JANUARIJ A. M.

7 4 Dist. æquat. ♂
 ab Arcturo 24 28
 Ascens. R. Arcturi 209 13
 Ascens. R. ♂ 184 45
 Declinatio Bor. 1 25 $\frac{3}{4}$

Die eodem, P. M. [N.]

15 52 Altitudo ♂ Merid. 35 28 45
 34 5 20
 Declinatio Bor. 1 23 25
 16 45 Declin. per Armill. 1 23 10
 16 0 Distantia ♂
 a corde Ω 39 52 $\frac{1}{2}$
 Pone tunc declinat. 1 23 20
 Diff. Ascens. 38 16 43
 Asc. R. ♂ 184 50 28
 16 40 Distantia ♂ a Spica \mathbb{M} 15 4 $\frac{1}{6}$
 Fuit tunc Declin. ♂ 1 23 $\frac{1}{4}$
 Diff. ascens. 11 0 5
 Asc. R. ♂ 184 52 45
 16 $\frac{1}{2}$ Pone Ascens. R. ♂ 184 51 30
 Declin. B. 1 23 10
 Resp. Longitudo 3 54 0 Ω
 Latitudo 3 12 28 B.

DIE 15 JANUARIJ.

15 50 Altitudo ♂ Merid. 35 26 30
 34 5 30
 16 51 Per Armillas 1 21 1 21 0
 15 57 Dist. inter ♂
 et Spic. \mathbb{M} 14 59
 erat mediocriter bona
 Declin. B. 1 21
 Diff. ascens. 10 55 5
 Ascens. R. ♂ 184 57 45
 Resp. Longitudo 4 0 48 Ω
 Latitudo 3 12 57 B.

DIE 21 FEBRUARIJ.

8 44 Inter ♂
 & 3^{am} alæ \mathbb{M} 4 4 $\frac{2}{3}$
 Altit. ♂ fere 16 grad.
 8 55 Inter ♂
 & eandem 4 4
 H.9 Declin. ♂ fuit 3 13
 10 9 Inter ♂
 & cor Ω 36 27 $\frac{1}{2}$ Altit. 24 $\frac{1}{3}$

10 11 Eadem repet. 36 28
 10 12 $\frac{1}{2}$ 36 27 $\frac{1}{2}$
 10 22 Declin. ♂ 3 14 26 $\frac{2}{3}$
 3 14 $\frac{1}{4}$

Horologij error in Meridie sequenti
 fuit insensibilis, nam 20'' scrupulis se-
 cundis saltem iusto tardius ibat.

DIE 23 FEBRUARIJ.

Sequentia propter motum
 et parallaxin.

7 46 Inter ♂ & 4 39 $\frac{1}{6}$ Altit. ♂ 9 gr.
 7 53 tertiam 4 39 $\frac{1}{4}$ 10 $\frac{1}{2}$
 7 56 \mathbb{M} . 4 39 $\frac{1}{2}$ 10 50
 8 0 Eadem 4 39 $\frac{1}{3}$ 11 $\frac{1}{4}$

Potes itaque insensibiliter iuxta Ho-
 ram a Meridie 7 Min. 45 vti distantia
 ♂ a dicta stella 4 g. 39 $\frac{1}{6}$ ' et Hora 8,4 g.
 39 $\frac{1}{6}$ ' nam aliquantulum ♂ interea a
 stella in antecedentia dimovebatur.

8 5 ♂ a secunda in ala \mathbb{M}
 sibi proxima stella
 distabat 2 29 Alt. ♂ 12 $\frac{1}{6}$
 8 10 Eadem
 repet. 2 29 $\frac{1}{6}$ 12 $\frac{1}{2}$ vel $\frac{3}{4}$

Hinc poterit locus ♂ scrutari &
 mane observari, quando ad occasum
 tendit in similibus distantijs pro pa-
 rallaxi eius eruenda H. 8 $\frac{1}{2}$ declinatio
 ♂ 3 grad. 29 $\frac{1}{3}$ Min. bis.

Nota. ♂ circa horam 10 visus est
 facere angulum rectum cum dictis
 duabus stellis \mathbb{M} vtpote secunda et
 tertia alæ australis.

P. M. N. quando cor Ω distabat a
 Meridiano ad occasum 34 57 transiit
 per Merid. habuitque Altit. ♂ 37 38 $\frac{1}{2}$

1 32 Inter ♂ & cor 35 46
 1 33 Ω per Sext. Δ 35 45 $\frac{3}{4}$
 1 35 $\frac{1}{2}$ 35 46

1 40 Inter ♂
 et Spicam 19 13 $\frac{1}{2}$

1 41 $\frac{1}{2}$ 19 13 $\frac{1}{2}$
 1 45 19 13 $\frac{1}{3}$

1 50 Declin. ♂ B. 3 33 $\frac{1}{3}$

5 7 Quando Alt. ♂ fuit 17 $\frac{1}{4}$ distabat
 a tertia in austr. ala \mathbb{M}
 4 45 $\frac{3}{4}$

5 11 Fuit dist. eadem 4 45 $\frac{1}{2}$, tunc fuit
Alt. eius 16 $\frac{1}{2}$.

Vltius propter auroram ♂ obser-
uare ♂ non licuit.

Horolog. in Mer. sequenti tardius
iusto ibat 9 $\frac{1}{2}$ M. qui error a duobus
diebus vtpote a Meridie diej 22 illi
obrepfit.

DIE 26 FEBRUARIJ, MANE.

| | |
|--------------------------|-------------------|
| 7 41 Inter ♂ et | 5 36 Alt. ♂ 10 20 |
| 7 44 tertiam in | 5 37 10 40 |
| 7 46 $\frac{1}{2}$ ala ♀ | 5 35 |

Prior est verior, hæc autem varietas
incidit propter interuenientes nubes.

Horologium in meridie 15 $\frac{1}{2}$ M. iusto
citius ibat, a meridie proximo iste er-
ror ei competit.

DIE 27 FEBRUARIJ, MANE.

| | |
|-------------------------------|------|
| 4 17 Inter ♂ & Med. | 35 0 |
| 4 19 $\frac{1}{2}$ ceruicis ♀ | 35 0 |

Vñ autem fumus potius ceruice ♀
eo quod cor ♀ eßet paulo decluius
versus Horizontem & refractionem
ingereret.

| | |
|----------------|-----------|
| 4 23 Declin. ♂ | |
| B. vno pinna. | 4 1 |
| altero | 4 1 dubiæ |

Fuit circa hæc tempora
alt. ♂ P. 23 proxime

Pro experiundis Armillis an axis
recte responderet axi mundi, obser-
uauimus quod australior & inferior
præcedentium in rotis habuerit de-
clinationem

| | |
|----------------|---------------------|
| vno pinnacidio | 58 37 $\frac{1}{2}$ |
| altero | 58 37 $\frac{3}{8}$ |

cum eßet inferior illa in vrfa a polo
in æquilibrio versus ortum. Debuit
autem habere declinationem 58 34.
Ergo armillarum axis erat suo loco
remotus, quare eum restituiamus.

Quia itaque declinationi acceptæ
subest vitium aliquod, igitur postea ♂
ab Arcuro acceptus est pro latitu-
dine eius. 5 27 A. M. Inter ♂ et Arc.
per Sext. 33 3 sed neque hæc distan-

tia erat admodum exacta, nam inter
nubes recurrentes accipiebatur; est
tamen mediocris, quaque sine sensi-
bili errore vti potes.

Vesper eodem die.

| | |
|----------------------------|-------------------------|
| 7 48 Inter ♂ & 6 | 2 Alt. ♂ 11 40 |
| 7 50 $\frac{1}{2}$ 3 alæ ♀ | 6 1 $\frac{1}{2}$ 12 0 |
| 7 53 | 6 1 $\frac{1}{2}$ 12 30 |
| 7 55 Per Armill. verific. | |

Decl. 4 5 $\frac{1}{2}$ B.

In Meridie sequente horologium
saltem 1' 25" iusto celerius ibat, qui
error abhinc biduo illi obrepfit.

DIE 3 MARTIJ.

N. B. ♂ circa ♀ Solis.

| | |
|--|-------------------------------|
| 12 24 $\frac{1}{2}$ A. M. ♂ per Merid. | Nota. Hæ |
| in Alt. per vol. 38 35 $\frac{1}{2}$ | obserua- |
| 12 40 Inter ♂ & | 2 57 $\frac{1}{2}$ tiones in |
| 12 45 2 ^{am} alæ ♀ | 2 57 $\frac{3}{8}$ ♂ sunt ad- |
| 12 53 Inter ♂ et | 7 14 $\frac{3}{8}$ modum |
| 12 55 3 ^{tiam} in | 7 14 $\frac{3}{8}$ bonæ pro |
| 12 57 ala ♀ | 7 15 eius loco |
| 1 9 Inter ♂ | 33 15 iuxta ♂ |
| 1 11 & cor ♀ | 33 15 cum Sole |
| 1 12 | 33 15 habendo. |
| 1 15 Inter ♂ & | 21 33 $\frac{1}{2}$ |
| 1 17 Spicam ♀ | 21 33 $\frac{1}{2}$ |
| 1 30 Declin. ♂ | 4 29 $\frac{1}{2}$ |
| alt. pinn. | 4 29 $\frac{1}{4}$ |
| 5 6 Mane. Inter ♂ | |
| & 3 alæ ♀ | 7 24 |
| Declin. 4 32 $\frac{1}{2}$ | Alt. 14 40 |
| 5 11 | 4 33 14 10 |

Dubiæ propter Auroram.

N. B. Pro fixarum locis a quibus ♂
obseruabatur.

| | Altitud. Merid. | Declinatio |
|---------------------------|---------------------|------------|
| Secunda in ala ♀ | 35 45 | 1 39 |
| Tertia in ala ♀ | 34 56 $\frac{1}{2}$ | 0 51 |
| Inter secund. & tertiam | | |
| in Austr. ala ♀ | 5 31 $\frac{1}{2}$ | |
| Inter secundam & Spicam ♀ | 14 29 $\frac{1}{8}$ | |
| Inter tertiam & Spicam ♀ | 19 15 $\frac{3}{8}$ | |
| Inter secundam & cor ♀ | 34 58 $\frac{1}{2}$ | |
| Inter tertiam & cor ♀ | 40 22 $\frac{1}{8}$ | |

Hinc poterint verificari harum stel-
larum loca. Habes plura in libro de
fixis.

EODEM DIE 3 MARTIJ P. M.

| | Diff. a 3 ^a alæ | Declin. ♂ | Azim. ♂ | Alt. ♂ |
|--------------------|-------------------------------|--------------------|------------|---------------------|
| 7 33 $\frac{1}{2}$ | 7 26 | 4 38 B | 77 42 | 13 9 |
| 7 39 | 7 26 $\frac{1}{6}$ | 4 38 | 76 55 | 14 3 |
| 7 44 | 7 26 $\frac{1}{2}$ | | | |
| 7 45 $\frac{1}{6}$ | | | 75 58 | 14 45 $\frac{1}{2}$ |
| 7 48 $\frac{1}{3}$ | 7 26 | 4 38 | | 14 55 |
| | a 1 alæ | | | |
| 7 57 $\frac{1}{2}$ | 6 20 | | | 16 10 |
| 8 0 | 6 20 $\frac{1}{3}$ | | | 16 $\frac{1}{2}$ |
| 8 2 | | 4 37 $\frac{1}{2}$ | | |

Azimuta numerantur a meridie
versus ortum.

Postea obseruabatur ♂ a cauda ♀
& Vindemiatore.

| Inter ♂ & caudam ♀ per Sext. | | | | |
|------------------------------------|---------------------|-----------------------|-------|---------------------|
| 8 6 $\frac{1}{2}$ | 13 54 $\frac{1}{4}$ | dubia | 71 19 | 17 36 $\frac{1}{3}$ |
| 8 10 | 13 52 | | 70 42 | 18 5 $\frac{1}{2}$ |
| 8 12 $\frac{1}{2}$ | 13 52 | | 69 58 | 18 26 $\frac{1}{2}$ |
| 8 16 | 13 52 $\frac{1}{6}$ | | 69 11 | 18 48 |
| ♂ a Vindemiatore | | | | |
| 8 19 $\frac{1}{2}$ | 14 27 | | 68 20 | 19 25 |
| 8 21 $\frac{1}{2}$ | 14 26 $\frac{5}{6}$ | | 68 1 | 19 40 |
| 8 23 | Fuit decl. ♂ 4 | 37 B | | |
| Inter ♂ & cor ♀ | | | | |
| 9 23 | 32 56 $\frac{2}{3}$ | | 53 30 | 27 8 |
| 9 27 $\frac{1}{6}$ | 32 56 $\frac{2}{3}$ | | 52 31 | 27 33 |
| 9 31 $\frac{1}{4}$ | 32 56 $\frac{2}{3}$ | | 50 0 | 28 11 |
| 9 35 | Decl. ♂ | | | |
| | repetita | 4 37 $\frac{1}{2}$ B. | | |

DIE 4 MARTIJ.

Mane sequente.

| | Diff. | Azim. ♂ | Alt. |
|--------------------|--|---------------------|-------|
| 5 2 | Inter ♂ & 3 Alæ | 7 40 | 75 25 |
| 5 4 | 50 | | 76 56 |
| 5 9 | ♂ a Vindem. | 14 24 $\frac{1}{4}$ | |
| 5 10 $\frac{1}{2}$ | | 14 25 | 77 52 |
| | pone | 14 24 $\frac{1}{2}$ | |
| 5 14 | 35 ♂ a | 13 48 $\frac{1}{4}$ | 78 40 |
| 5 16 | cauda ♀ | 13 48 $\frac{1}{4}$ | 78 20 |
| | Sed Nota, erant rariufculæ nubes, nec ♂ erat admodum serenus. | | |

Deinde pro corrigendo horologio
accepimus Vulturis stellam in di-
stantia a Meridiano & vna ♂.

| | Vultur or. | ♂ occid. | Diff. æquat. | Alt. ♂ |
|---------|---------------------|---------------------|---------------------|-----------|
| 5 20 42 | 40 42 | 73 21 $\frac{1}{2}$ | 114 3 $\frac{1}{2}$ | |
| 5 22 30 | 40 14 $\frac{3}{4}$ | 73 48 $\frac{3}{4}$ | 114 3 $\frac{1}{2}$ | 12 45 |
| 5 24 25 | 39 46 $\frac{1}{4}$ | 74 16 $\frac{1}{2}$ | 114 2 $\frac{3}{4}$ | |

Postea obseruabatur ♂ in Azimuto
et Altitudine hoc modo.

| | Arctur. occ. | Azim. ♂ | Alt. ♂ |
|---------|-----------------|------------|---------------------|
| 5 36 20 | 46 29 | 82 0 | 11 11 $\frac{1}{4}$ |
| 5 38 42 | 47 7 | 82 30 | 10 51 $\frac{1}{4}$ |
| 5 39 55 | Decl. ♂ 4 | 42 B. | 10 45 |

Horolog. in Meridie sequente 14 $\frac{1}{2}$
Min. iusto celerius mouebatur, idque
a meridie præcedente nescio quo er-
rore.

Post Meridiem

| | Diff. a cauda ♀ | Azim. ♂ | Alt. ♂ |
|--------------------|---------------------|------------|---------------------|
| 6 58 | 13 35 | | 9 13 |
| 7 2 | 13 34 $\frac{1}{2}$ | 83 46 | 9 59 |
| 7 4 | 13 34 $\frac{1}{2}$ | 83 15 | 10 17 |
| 7 5 | 13 34 | 82 59 | 10 24 |
| 7 7 $\frac{1}{3}$ | 13 34 | 82 30 | 10 43 $\frac{1}{2}$ |
| ♂ a Vindemiatore | | | |
| 7 12 $\frac{1}{2}$ | 14 39 | 81 45 | 11 24 $\frac{1}{2}$ |
| 7 14 $\frac{1}{3}$ | 14 38 | 81 4 | 11 43 $\frac{1}{4}$ |
| 7 16 $\frac{1}{2}$ | 14 38 $\frac{1}{2}$ | 80 42 | 12 3 $\frac{1}{2}$ |
| 7 18 $\frac{1}{2}$ | 14 38 $\frac{2}{3}$ | 80 6 | 12 18 |

Pone in

prima 13 34 $\frac{1}{2}$

in se-

cunda 14 38 $\frac{1}{2}$

| | | | |
|--------------------|------------------|----------------------|-------|
| 7 22 | Declin. ♂ | 4 47 $\frac{1}{4}$ B | 12 49 |
| 7 26 | | 4 48 B | |
| 7 30 | Inter ♂ & 5 | 59 $\frac{1}{4}$ | 77 49 |
| 7 31 $\frac{1}{3}$ | Iam 5 | 59 $\frac{3}{4}$ | 77 20 |
| 7 34 $\frac{1}{2}$ | alæ 5 | 59 | 76 34 |
| 7 36 $\frac{1}{3}$ | ♣ 5 | 59 | 76 18 |
| 7 39 | 5 | 58 $\frac{1}{6}$ | 15 10 |
| 7 40 | 5 | 59 $\frac{1}{2}$ | 15 22 |
| Pone diff. 5 | 59 $\frac{1}{3}$ | | |
| 7 42 $\frac{1}{2}$ | Decl. ♂ | 4 48 | 15 35 |
| | altero | 4 47 $\frac{1}{4}$ | |

| | | | |
|----------------------|-------|-------|-------|
| 7 49 ♂ & 3 | 7 52½ | 74 15 | 16 36 |
| 7 52½ alæ ♀ | 7 52½ | | |
| 7 58½ | 7 52½ | | |
| 8 0½ Inter | | | |
| ♂ & 34 17 | 71 10 | 17 58 | |
| 8 1½ Arcu-34 17 | 70 45 | 18 7 | |
| 8 2½ rum 34 17 | 70 30 | 18 17 | |
| 10 57½ Inter | | | |
| ♂ & 32 32 | 36 10 | | |
| 11 1 cor Ω 32 31½ | 36 45 | | |
| 11 2½ 32 32 | 36 50 | | |
| 11 3½ 32 31½ | 37 0 | | |
| 11 9 Decl. ♂ 4 46¼ B | | | |

DIE 5 MARTIJ A. M.

| | | | |
|---|---------|--------|--|
| 0 15 Alt. ♂ Merid. | 38 52½ | | |
| 0 34 Inter | | | |
| ♂ & 22 21 | | | |
| 0 36 Spicam 22 21 | | | |
| 0 37½ ♀ 22 20½ | | | |
| 0 39 22 21 | | | |
| 0 53 a corde 32 30½ | | | |
| 0 54½ Ω 32 30 | | | |
| 0 55 32 30 | | | |
| 0 58 Decl. ♂ 4 45½ | | | |
| Cor Ω | ♂ | Diff. | |
| occ. | occid. | æquat. | |
| 1 5 30 44 21½ | 12 44½ | 31 37 | |
| 1 7 10 44 45½ | 13 8½ | 31 37½ | |
| 1 9 0 45 14 | 13 36½ | 31 37½ | |
| 1 10 50 45 40¼ | 14 3½ | 31 36½ | |
| 1 13 25 46 21 | 14 43½ | 31 37½ | |
| 1 15 30 46 52¼ | 15 15 | 31 37¼ | |
| Pone ad H. 1½ diff. æquat. | | 31 37½ | |
| ♂ | Spica ♀ | | |
| occid. | occid. | | |
| 1 35 30 20 21 | 2 37 | 17 44 | |
| 1 37 25 20 49½ | 3 6½ | 17 43 | |
| 1 38 50 21 9¼ | 3 26 | 17 43¼ | |
| 1 40 20 21 32½ | 3 50 | 17 42¾ | |
| 1 42 5 21 58½ | 4 15½ | 17 43 | |
| 1 44 Declin. ♂ 4 45½ tunc fuit Alt. 35½ | | | |

Hoc die 4 Hor. 13½ P. M.

| | |
|------------------------|---------|
| Medius locus ☉ | 21 59) |
| Verus locus ♂ | 26 28 ♀ |
| Motus diurnus ☉ medius | 0 59 8" |
| Motus diurnus ♂ verus | 0 24 |

Hinc provenit interuallum temporis oppositionis eorum a tempore hu-

ius obseruationis dierum 3 horarum 5½. Ergo tempus ♂ die 7 H. 19 M. 10 P. M. Tuncque medius locus ☉ 25 10 23)
verus locus ♂ 25 10 20 ♀

Sed hæc e sequentibus exactius sunt exploranda.

Post meridiem

| | Inter ♂ & cor Ω | Azim. ♂ | Alt. ♂ |
|------|-----------------|---------|--------|
| 7 1 | 32 10 | 82 0 | 11 22 |
| 7 2½ | 32 9½ | 81 10 | 11 34 |
| 7 3½ | 32 9½ | 80 40 | 11 46 |

Nota. In hac obseruatione ♂ est habenda ratio refractionis, erat siquidem decliuis vtpote in Alt. 11½ partium.

| | Azim. ♂ | Alt. ♂ |
|--------------------------|---------|--------|
| 7 7 Decl. ♂ 4 56 B | | 12 18 |
| 7 8¼ 4 56 | | |
| 7 10½ alt. pinn. 4 55¼ | | 13 |
| 7 11½ eodem pin. 4 55½ | | |
| 7 19½ Inter ♂ & 14 50½ | 77 50 | 13 55½ |
| 7 21½ Vinde- 14 50 | 77 23 | 14 15 |
| 7 23¼ miato-rem ♀ 14 50¼ | 77 0 | 14 32½ |

Nota. ♀ & Canis maior transibant Meridianum simul hoc vesperi, habuitque ♀ Alt. Mer. 57 11.

DIE 7 MARTIJ.

| | ♄ | Diff. æquat. | Alt. ♂ |
|----------------|-------|--------------|--------|
| Vesperi occid. | ♂ or. | | |
| 10 10½ 51 51 | 29 0½ | 80 51½ | 33 58 |

Non erat serenum sed inter nubes accipiebatur, neque licuit quidpiam plus tunc habere.

Pro¹ latitudine ♂ ad diem 7 Martij
H. 17½ quando opponebatur
simplici ☉.

| | |
|--|--|
| 5 ^D 0 ^H 15 ^M P. M. N. Asc. R. ♂ 178° 3' | |
| Declin. ex alt. m. 4 47 B. | |
| Resp. Latitudo 3 36 30'' B. | |
| 10 11½ Asc. R. ♂ 176 1 | |
| Declin. ex alt. m. 5 35 15 | |
| Resp. Latitudo 3 32 12 B. | |

¹ E codice V.

Ergo resp. latitudo obseruata
ad tempus oppositionis cum Sole
superius deputatum.

Lat. 3° 34' 36"
Alt. 39° Parall. alt. ♂ 3 55
Resp. Parall. latit. 3 36
Vera igitur latitudo ♂ 3 38 12

DIE 9 MARTIJ P. M.

Obseruabatur ♂ iam paululum
prætergreßus Solis oppositum
in hunc modum.

9 21 Declin. ♂
vno pinn. 5 25½ Alt.
altero 5 26 31 21
♂ Cor ♀ Dist. Alt.
orient. or. æqu. ♂
9 25 36 0 6 10½ 29 49½ 31 49
9 26½ 35 37½ 5 48½ 29 48½
9 30 34 45½ 4 56½ 29 49
9 31½ 34 17¾ 4 29½ 29 48½ 32 30
9 33½ 33 53 4 3 29 50
9 35½ 33 19½ 3 30½ 29 49½ } 33 0
bona }
9 37½ 32 51½ 3 2½ 29 49½
9 39½ 32 24½ 2 35 29 49½ 33½

Pone H. 9½ dist. æqu. ♂
a corde ♀ 29 49 infalli-
9 43 Declin. ♂ biliter
vno pinn. 5 26 Bor.
altero pinnac. 5 26
Locus¹ ♂ hinc prouenit ad H. 9½
24 32 ♀. Pruten. dat 26 38 ♀, Lat.
3 33 Bor. Differ. P. 2 M. 6'.

Repetebatur eius dist. æquat.
a corde ♀.

♂ Cor ♀ Dist. Alt.
orient. occ. æqu. ♂
9 57 27 55 1 54½ 29 49½ 34 49
10 0 27 12½ 2 37 29 49½ 35 0
10 3½ 26 22½ 3 27 29 49½

Postea obseruabatur ♂ ab Arcturo
vice versa.

10 8 25 11½ 57 56¾ 32 45½
10 10 24 45 57 32 32 47 35 45
10 11½ 24 24 57 10 32 46
10 13 23 57¼ 56 44 32 46¾ 36 0
10 15 23 26½ 56 13½ 32 47
Pone dist. æqu. ab Arct. 32 46½

¹ E codice V.

♂ or. Spica or. Alt. Spicæ
10 38 45 17 27 36 56½ 19 29½ 18½
10 41 45 16 42½ 36 12 19 29½ 18½
10 44 5 16 8½ 35 38½ 19 30 18½
Alt. ♂
10 48 15 15 7½ 34 37 19 29½ 38½
11 20 Decl. 5 26 B. 39 17
11 27 5 20 24 50 19 30 39 20
11 29 4 55 24 26½ 19 31½
Non fuit satis serenum.
11 45 24 ♂ in Azim.
a Mer. ad ort. 1 15 39 32

Uterius propter interpositionem nu-
bium denfarum plures obseruationes
facere non licuit.

Horologium in Meridie sequente 4
scrupulis iusto tardius ibat, sed is er-
ror ab Hora 8½ Vesperis præcedente
venit æstimandus.

DIE 10 MARTIJ, P. M.

Obseruatio ♂ iuxta horizontem ob
parallaxin eius indagandam.

Azim. ♂ Alt. ♂
6 44 Decl. ♂ 5 36¼ B 12½
6 50½ Inter ♂ 30 13½ 79 45 13 43
6 52 & cor ♀ 30 13½ 14 0
6 54½ 30 13½ 78 52 14 13½
6 57½ 30 13½ 78 9 14 38
7 4 6" ♂ a 12 0 76 48 15 33
7 5 cauda 12 0½ 76 26 15 42
7 6 ♀ 12 0¼
7 8 20 12 0 75 59 16 9
7 10 Decl. ♂ 5 35 16 26
7 15 alt. 5 34¾ 17 11
7 22 Inter ♂ 35 44½ 18 3
7 24½ & Arc-35 44½ Alt. Arct. 13 10½
7 26½ turum 35 44½ 13 24½

Postea vt constaret refractionis ♂ ob-
seruabatur Arcturus a cauda ♀ in
confimili existens altitudine qua ♂
ab initio erat.

Alt. Arcturi
7 29 Dist. Caudæ ♀ 35 22½ 13 43
7 30½ & Arct. 35 22½ 13 54
7 32½ 35 22 14 13

Postea accipiebatur a lucida ceruicis ♀ & arcturo.

| | | |
|----------------------------------|---------------------|-------|
| 7 37 Arcturus | 55 18 $\frac{1}{4}$ | 14 53 |
| 7 39 $\frac{1}{2}$ & lucida | 55 18 $\frac{1}{2}$ | 15 13 |
| 7 42 ceruicis ♀ | 55 18 $\frac{1}{2}$ | 15 30 |
| 7 44 $\frac{1}{2}$ Decl. Arcturi | 21 24 | 15 54 |
| repetita | 21 24 $\frac{1}{8}$ | |
| altero pinn. | 21 24 $\frac{1}{8}$ | |

N. B. Sequentes obseruationes in Spica & corde ♀ *acceptæ sunt propter refractionem* ♂ *cognoscendam.*

| | Alt. Spicæ | |
|-------------|------------------------|-------|
| Inter cor ♀ | I 54 0 $\frac{1}{2}$ | 12 45 |
| & Spicam ♀ | II 54 0 $\frac{3}{4}$ | 13 4 |
| H. 9 M. 45 | III 54 0 $\frac{1}{3}$ | 13 20 |
| 9 48 | III 54 0 $\frac{1}{8}$ | 13 39 |
| Decl. Spicæ | 8 55 $\frac{1}{2}$ | 13 53 |
| repetita | 8 55 $\frac{1}{2}$ | |

Habuit itaque refractionem in distantia 1 $\frac{1}{2}$, *in declinatione etiam tantundem fere.*

Potes ponere refractionem
in distantia 1 40
in declinatione 1 30

Obseruabatur ♂ *circa Meridianum*

| | | |
|----------------------|---------------------|--|
| 11 25 Decl. ♂ Bor. | 5 35 | |
| Spica or. | ♂ orient. | Diff. æquat. |
| 11 29 15 | 23 4 $\frac{1}{2}$ | 3 11 19 53 $\frac{1}{2}$ |
| 11 30 57 | 22 38 | 2 44 $\frac{1}{2}$ 19 53 $\frac{1}{2}$ |
| 11 32 40 | 22 13 | 2 20 19 53 |
| 11 36 Inter ♂ & | 24 33 $\frac{1}{2}$ | |
| 11 38 Spicam ♀ | 24 33 $\frac{2}{3}$ | |
| 11 39 per Sext. Δ | 24 33 $\frac{1}{2}$ | |
| 11 42 26" Transiit ♂ | | |
| per Mer. in Alt. | 39 40 $\frac{3}{4}$ | |
| Fuit tunc Spica | | |
| a Mer. ad ort. | 19 42 | |
| 11 53 Inter ♂ et cor | 30 8 | Erat me- |
| 11 55 ♀ per Sex- | 30 7 $\frac{1}{2}$ | diocriter |
| 12 2 tantem Δ | 30 7 $\frac{3}{8}$ | ferenum. |

Nota. Obseruationes hac nocte factæ, præsertim cum ♂ *eßet prope Meridianum per distantiam a corde* ♀ *et Spica sunt admodum bonæ pro inquirendo loco eius in* ♂ *Medij Solis, nam sunt diligenter factæ & erat satis ferenum & tranquillum, potes autem conferre eas cum antecedentibus,*

quæ factæ sunt Marte ad oppositionem Solis nondum pertingente, vbi autem conferre eas volueris, facies id potissimum ad obseruationes die 4 Martij habitas, etiam a corde ♀ *& Spica iuxta Med. Noct. sequentem proxime, tunc enim Mars etiam diligenter obseruabatur vtraque ratione, tam per distantiam Sext. a Spica & corde* ♀ *quam per Armillas in distantia æquatoria vtriusque quemadmodum etiam hac nocte vtroque modo diligenter acceptus est. Facit autem hoc aliquid ad rej commodiorem certitudinem quod* ♂ *tam die 4 quam hoc 10 vtroque iuxta Med. Noct. quasi æqualiter remotus fuerit a tempore veræ* ♂ *cum Medio Solis, ea enim facta vt superius annotatur P. M. N. diej 7 huius mensis horis proxime elapsis quinis, cuius tamen exactior certitudo præsertim quoad horas & locum Eclipticæ in quo* ♂ *contingebat ex antecedentibus inquirenda venit, si cum obseruationibus hac nocte factis diligenter conferantur.*

Sequitur obseruatio ♂ *ad occasum tendentis P. M. N.*

| | Distantia | Decl. ♂ | Alt. ♂ |
|--------------------|---------------------|-----------------------|---------------------|
| 4 14 $\frac{1}{2}$ | | 5 38 bis | 16 42 |
| | a tertia alæ | | |
| 4 16 $\frac{1}{2}$ | 10 11 | | 16 19 |
| | Ab Arcturo | | |
| 4 20 $\frac{1}{2}$ | 35 48 $\frac{1}{2}$ | | 15 45 |
| 4 25 $\frac{1}{2}$ | 35 49 | | 15 5 |
| 4 28 | 35 49 $\frac{1}{6}$ | | 14 45 |
| 4 29 | 35 49 $\frac{1}{4}$ | 5 38 $\frac{2}{3}$ B. | 14 30 |
| 4 35 | 35 49 $\frac{1}{6}$ | | 13 50 |
| 4 42 $\frac{1}{2}$ | 35 49 | | 12 40 |
| 4 44 $\frac{1}{2}$ | | 5 39 $\frac{1}{2}$ | 12 25 |
| | a cauda ♀ | | |
| 4 48 $\frac{1}{2}$ | 11 52 $\frac{1}{3}$ | | 11 49 $\frac{1}{2}$ |
| 4 50 $\frac{1}{2}$ | 11 54 | | 11 30 |
| | Inter ♂ & Spicam | | |
| 4 53 $\frac{1}{2}$ | 24 39 $\frac{2}{3}$ | | 11 7 $\frac{1}{2}$ |
| 4 54 | | 5 39 $\frac{1}{2}$ | |
| 4 56 $\frac{1}{2}$ | 24 39 $\frac{1}{4}$ | | 10 41 $\frac{1}{8}$ |
| 4 58 $\frac{1}{2}$ | 24 39 $\frac{1}{3}$ | | 10 25 |
| 5 1 | 24 39 $\frac{1}{8}$ | | 10 10 |
| 5 1 $\frac{1}{2}$ | | 5 39 $\frac{5}{8}$ | |

Nota. Non poterat refractio sensibilem aliquam ingerere differentiam in distantia inter ♂ & Spicam, eo quod ambo essent in æquilíbrio ferme horizontis quasi in æquali altitudine, sed ♂ tamen paulo altior quam ipsa Spica.

| | Repetebatur ♂ ab Arc̄. | Alt. ♂ |
|------|------------------------|--------|
| 5 5 | 35 48 | 9 30 |
| 5 7½ | 35 48 | 9 10 |
| 5 9¾ | 35 48½ | 8 55 |
| 5 10 | 5 40 | 8 50 |
| 5 13 | 35 48 | 8 25 |
| 5 16 | 7 50 | 7 50 |
| ... | 5 40½ | 7 45 |

His obseruationibus collatis cum ijs quæ vesperi antecedente capiebantur, potes vti in parallaxi ♂ inquirenda, adhibita vtrouque iusta refractione, vt decet, & facere periculum, an terris ita prope sit, vt vult Coperniana in ipsius motu hypothesis.

DIE 12 MARTIJ, P. M.

| | | |
|-----------------------------|--------------|------------|
| 9 ^H 1' Declin. ♂ | 5 50 B. | Alt. 30 46 |
| 9 5 Inter ♂ & | 29 27½ | |
| 9 7 cor ♂ | 29 28 | 31½ |
| 9 8 | 29 27¼ | |
| 9 10 | 29 27½ | |
| 9 15 Inter | 36 17¼ | |
| 9 17 Arc̄. | 36 17¼ | 32½ |
| 9 20 & ♂ | 36 17¼ | |
| 9 23 Declin. ♂ | 5 51 Bor. | |
| | altero 5 51¼ | |

DIE 13 MARTIJ, P. M.

| | | |
|----------------|-------|------------|
| 7 36 Inter ♂ & | 29 4 | Alt. ♂ 21½ |
| 7 42 cor ♂ | 29 1 | 21 32 |
| 7 45 | 29 2 | 22 0 |
| 7 53 | 29 4½ | 23 12 |

Hæ per Sext. nouum, sed validissimo vento agitabatur instrumentum, ideoque his obseruationibus non est fidentum.

N. B. Circa H. 11 horologium verificatum est.

11 30 12" Transiit ♂ per Mer. in Alt.

Distabat tunc Spica a Mer. or. 20 49

Eratque tunc ♂ raris nubibus nonnihil offuscatus.

| | Cor ♂ occ. | ♂ occ. | Dist. æquat. | Alt. ♂ |
|----------|---------------|-----------|-----------------|-----------|
| 11 52 15 | 34 6 | 5 46 | 28 20 | |
| 11 54 0 | 34 33 | 6 12 | 28 21 | |
| 11 55 15 | 34 52½ | 6 32½ | 28 20½ | 39 52 |
| 11 57 8 | 35 21 | 7 0½ | 28 20½ | |
| 11 58 23 | 35 40 | 7 19½ | 28 20½ | 39 40 |

DIE 14 MARTIJ A. M.

| | Spica or. | ♂ occ. | | |
|--------|-----------|--------|---------|-------|
| 0 1 34 | 12 54 | 8 6 | 21 0 | |
| 0 3 35 | 12 24½ | 8 35 | 20 59½ | |
| 0 5 12 | 12 0 | 9 0 | 21 0 | |
| 0 8 0 | 11 17 | 9 43 | 21 0 | |
| 0 9 20 | 10 55¾ | 10 4 | 20 59¾ | |
| 0 11 6 | 10 31¼ | 10 29 | 21 0¼ | 39 23 |
| 0 17 | Declin. ♂ | | 6 0½ B. | |
| | altero | 6 0½ | | |

DIE 17 MARTIJ P. M.

| | | | |
|--------------------|------------|---------------|--------------|
| 10 18 Declin. ♂ | 6 25 B. | Alt. ♂ 38½ | |
| 10 20 Inter cor | 27 34½ | 39 | |
| 10 22 Ω & ♂ | 27 34½ | | |
| 10 23 | 27 34½ | Alt. Spicæ | |
| 10 28 Inter Spicam | 27 3¼ | 18½ | |
| 10 29 ♯ & ♂ | 27 3¼ | | |
| 10 30 | 27 3½ | | |
| | Cor Ω occ. | ♂ orient. | Dist. æquat. |
| 10 35 58" | 15 28¼ | 11 26½ | 26 54¾ |
| 10 38 26 | 16 6 | 10 48½ | 26 54½ |
| 10 39 50 | 16 28 | 10 26¾ | 26 54¾ |
| 10 41 20 | 16 50½ | 10 4¼ | 26 54¾ |
| 10 43 Declinatio ♂ | | | |
| Bor. | 6 25 | | |
| Repetita | 6 25 | | |

Horolog. in meridie proxime sequenti 16 Minutis iusto citius mouebatur, qui error a meridie antecedente euenit.

DIE 27 MARTIJ, VESPERI.

N. B. Horologium circa H. 9½ verificatum est.

| | | |
|----------------------|--------|------------------------|
| 9 31 Declin. ♂ | 7 18½ | Bor. |
| 9 35 Inter ♂ & | 24 28 | } Per Sext. nov. |
| 9 37 cor ♂ | 24 28 | |
| 9 40 Inter ♂ | 39 53 | |
| 9 41 & Arc̄. | 39 53½ | |
| 9 43 | 39 53 | |
| 9 44 Repet Declin. ♂ | 7 18½ | Alt. 41½ |

DIE 1 APRILIS.

H. 9 M. 1 Declin. ♂ 7 35, Alt. 40 25
 Eodem instanti dist. a Regulo 23 12
 9 3 $\frac{3}{4}$ Repet. dist. ♂ & Reg. 23 11 $\frac{3}{4}$
 Melius serenum. Pone distantiam
 ♂ & Reg. 23 12, et est melius.
 9 17 Repetita ♂ Decl. 7 35

Hactenus quando ♂ obseruabatur
 hoc vesperi non fuit satis serenum.

9 21 Dist. ♂ a corde ☉ 23 14 $\frac{1}{2}$
 9 24 per Sext. vet. 23 14 $\frac{1}{2}$
 9 26 23 14 $\frac{2}{3}$
 9 33 ♂ a Spica ♄, erat bene 31 10
 9 35 serenum 31 10
 9 38 31 10
 9 42 Repetita Declin. ♂ 7 34 $\frac{3}{4}$
 9 55 $\frac{1}{2}$ Altit. ♂ Meridiana 41 40 $\frac{1}{6}$

DIE 5 APRILIS P. M.

8 36 $\frac{1}{3}$ Decl. 7 41 B.
 8 38 Inter ♂ 22 31 $\frac{5}{8}$
 8 39 $\frac{1}{2}$ & cor 22 31 $\frac{5}{8}$ Alt. ♂ 40 G.
 8 41 ☉ 22 31 $\frac{5}{8}$

DIE 13 APRILIS, VESPERI.

8 59 Decl. ♂ 7 39 $\frac{1}{2}$ B.
 9 6 Inter ♂ 21 44 $\frac{1}{2}$
 9 7 & cor ☉ 21 44 $\frac{1}{3}$
 9 8 $\frac{1}{2}$ 21 44 $\frac{1}{2}$
 9 13 Inter ♂ 32 34
 9 14 & Spicam 32 34
 9 15 32 34
 per. Sext. vet.
 9 19 10'' Transiit ♂ Meridianum &
 habuit Alt. per Q. volub. 51 43 $\frac{1}{2}$
 tunc fuit Spica a Mer. ad Ort. per Arm. 28 17 $\frac{1}{2}$

DIE 21 APRILIS.

9 26 Decl. ♂ 7 17 B
 9 29 Inter ♂ et 21 45
 9 31 Cor ☉ per 21 45 $\frac{1}{4}$
 9 32 Sext. vet. 21 45
 9 37 Inter ♂ & 32 28 $\frac{2}{3}$
 9 38 Spicam ♄ 32 28 $\frac{1}{2}$
 9 41 32 28 $\frac{2}{3}$
 9 44 Declin. ♂ 7 17

OBSERVATIONES VENERIS.

DIE 6 JANUARIJ P. M.

2^H 55' Transiit ♀ per Merid. habuit-
 que Altitudinem per Quad. Vo-
 lubil. 27 35 fere
 2 58 $\frac{3}{8}$ Azimut ♀ occ. 1 37
 Alt. 27 33

Obseruabatur ♀ a centro ☉ Alt. ☉
 3 2 $\frac{1}{2}$ Inter ☉ et ♀ 44 36 $\frac{1}{3}$ 4 0
 3 5 $\frac{1}{2}$ per Sextant. 44 37 3 45
 3 8 44 37 $\frac{1}{4}$ 3 30
 3 10 44 36 3 15
 3 12 44 37 3 0
 3 15 44 37 $\frac{1}{2}$ 2 50

In duabus vltimis obseruationibus
 accipiebatur per æstimationem & vi-
 sum centrum ☉, eo quod nimis mag-
 nam ☉ per se faceret illuminationem.

3 16 $\frac{1}{2}$ ♀ ab occid.
 limbo ☉ 44 51 $\frac{1}{4}$ Alt. ☉ 2 40
 3 18 ♀ ab orient.
 limbo ☉ 44 18 $\frac{3}{4}$ 2 30

Ergo H. 3 M. 17 ♀

a centro ☉ 44 35
 3 20 $\frac{1}{2}$ ♀ ab occ.
 limb. ☉ 44 50 2 15
 3 22 $\frac{1}{3}$ ♀ ab orient.
 limb. ☉ 44 17 $\frac{1}{4}$ 2 5

Ergo distantia 44 34 fere

Postea accipiebatur ♀ in Azimutis

3 41 24'' ♀ Azim.
 occ. 13 42 Alt. ♀ 26 49
 4 34 ♀ a ☿ 45 22 24 10
 4 37 per Sext. 45 21 $\frac{2}{3}$ 24 0
 4 38 $\frac{1}{2}$ 45 21 $\frac{1}{2}$ 23 50
 4 41 45 21 $\frac{1}{4}$ 23 40

Pone itaque veram distantiam per
 Sextantem circa H. 4 38' 45 21 $\frac{1}{2}$

5 28 $\frac{1}{2}$ Declin. ♀ M. vno 6 24 Alt. ♀
 altero 6 24 $\frac{1}{2}$ 19 45

Postea denuo ♀ ab ☿ per Arm. maiores

♀ occid. Luc. ☿ or. Diff. Asc. R.
 5 33 20'' 40 28 $\frac{1}{2}$ 3 41 44 9 $\frac{1}{2}$
 5 39 23 42 1 $\frac{1}{4}$ 2 9 $\frac{1}{2}$ 44 10 $\frac{1}{2}$

Horolog. in Meridie erat correctum
fatis exacte (adde $\frac{1}{2}$ pro correctione
æquat.).

5 47 55 Transiit Luc. \vee Meridianum
& habuit Alt. 55 34 $\frac{1}{2}$ per volu-
bilem.

Hincque poterit rursus verificari
tempus horologij, vt transitus \llcorner et h
per Merid. exacte content.

Postea denuo obseruabatur Q per
Sext. a lucida \vee & in declin.

| | | |
|---------------------------------------|--|-------------------|
| | | Altit. Q |
| 5 53 $\frac{1}{2}$ Declin. Q | vno 6 25 aufst. | 17 0 |
| | altero 6 24 $\frac{5}{8}$ | |
| 6 0 Q a luc. \vee | 51 29 6 25 M. | 16 30 |
| 6 4 $\frac{1}{2}$ per Sext. | 51 29 $\frac{1}{4}$ 6 24 $\frac{5}{8}$ | 16 |
| | Repet. 51 28 $\frac{5}{8}$ | |

Pone circa H. 6 dist. Q a Luc. \vee
51 29 bene,

& declinationem Q 6 25 sed habenda
ratio refractionis.

| | | | |
|--------------------|---------------------|---------|-------|
| 6 10 | 51 28 $\frac{3}{4}$ | 6 25 | 15 10 |
| 6 12 $\frac{1}{2}$ | 51 28 $\frac{3}{4}$ | 6 25 M. | 15 0 |

Potes itaque pro verificando loco Q
infallibiliter ad H. 6 compl. ponere di-
stantiam inter Lucid. \vee et Q per Sext-
tant. 51° 29'. Nam quod postea quarta
parte vnus scrupuli arctior videba-
tur, effecit Q Refractio interea paulo
plus augmentata.

Hinc itaque verificetur locus Q ex-
acte, & habita ratione refractionis ac
parallaxeos, applicetur ad tempus
quo \llcorner a Q obseruabatur, vt constet \llcorner
locus iuxta 90 gradum, quando \llcorner erat
prope Apogæum et in quadratura
cum \odot .

Potest etiam hic locus Q viceversa
applicari ad \odot quando a sole in eo
tempore eius capiebatur distantia,
modo habeatur tum in \odot tum in Q ra-
tio parallaxeos & refractionis, quæ in
 \odot ob decliuitatem admodum erat eui-
dens. Hincque loca fixarum ad \odot et \llcorner
examinari.

¹ E codice V.

DIE 6 JANUARIJ.

Pro Asc. Recta Q

| | | |
|----------|------------------------------------|---------------------|
| H. 4 37' | Dist. inter Q^{em} | |
| | & h^{um} | 45 22 |
| | Decl. Q Aufst. | 6 25 |
| | Decl. h Bor. | 7 47 $\frac{1}{2}$ |
| | Diff. Ascens. | 43 11 59 |
| | Asc. R. h | 25 0 30 |
| | Asc. R. Q | 341 48 30 |
| H. 6 3' | Inter Q & luc. \vee | 51 29 |
| | Decl. Q Aufst. | 6 24 $\frac{1}{2}$ |
| | Decl. luc. \vee B. | 21 28 $\frac{5}{8}$ |
| | Diff. Ascens. | 44 8 48 |
| | Asc. R. luc. \vee | 26 1 20 |
| H. 6 3' | Asc. R. Q | 341 52 0 |
| | Ponatur H. 6 M. 3 Asc. R. | 341 52 |
| | Decl. Aufst. | 6 25 0 |
| | Resp. Longitudo | 10 50 23) |
| | Latitudo | 1 11 46 B. |

Pro Ascensione Recta Q

DIE 6 JANUARIJ¹.

| | | |
|-----------|--------------------------------|-----------|
| H. 6 M. 0 | Dist. Q a luc. \vee | 51° 29' |
| BA 68 31 | Declin. Q | 6 25 M. |
| CA 96 25 | Declin. luc. \vee | 21 29 |
| BC 51 29 | Asc. R. luc. \vee | 26 1 20" |
| BAC 44 8 | Ergo Asc. R. Q | 341 53 20 |

DIE 9 JANUARIJ P. M.

| | | | | |
|--------------------|-------------------------------|---------------------|--------------------|------------|
| 2 21 | Inter Q & \odot | 43 51 $\frac{1}{2}$ | Alt. \odot | 8 quasi |
| 2 24 | per Sext. | 43 51 | | 7 50 |
| 2 26 $\frac{1}{2}$ | | 43 52 | | 7 45 |
| 2 29 $\frac{1}{2}$ | | 43 51 $\frac{1}{3}$ | | 7 30 |
| 2 36 | | 43 51 $\frac{1}{3}$ | | 7 10 |
| 2 42 $\frac{1}{2}$ | | 43 51 $\frac{1}{3}$ | | 6 30 |
| 2 48 | | 43 50 | | 6 0 |
| 2 49 55" | transiit Q Merid. | | | |
| | habuit Alt. | | 28 52 | |
| | | | | per volub. |
| 2 53 | Decl. Q per Armillas | | | |
| | | vno | 5 12 $\frac{3}{4}$ | |
| | | alt. | 5 12 $\frac{1}{2}$ | |

Erit itaque vera declin. 5 13 M.

| | ♀ a ☉ | Declin. ☉ | Alt. ☉ |
|--------------------|---------------------------------|---------------------|--------|
| 2 58 | 43 49 $\frac{1}{2}$ | 20 15 $\frac{1}{6}$ | 5 10 |
| 3 1 $\frac{1}{2}$ | 43 49 | 20 14 $\frac{5}{6}$ | 5 0 |
| 3 4 $\frac{1}{2}$ | 43 48 | 20 14 $\frac{1}{2}$ | 4 40 |
| 3 7 $\frac{1}{2}$ | 43 47 | 20 14 | 4 10 |
| 3 11 $\frac{1}{2}$ | 43 46 $\frac{1}{3}$ | 20 13 | 3 50 |
| 3 14 $\frac{1}{2}$ | 43 46 | 20 12 $\frac{1}{2}$ | 3 30 |
| 3 19 $\frac{1}{3}$ | | 20 11 $\frac{1}{6}$ | 3 10 |
| 3 22 $\frac{1}{3}$ | 43 45 | 20 10 | 3 0 |
| 3 27 $\frac{1}{2}$ | 43 44 | 20 7 $\frac{1}{2}$ | 2 30 |
| 3 30 | 43 43 $\frac{1}{2}$ | | 2 20 |
| 3 33 $\frac{1}{2}$ | Decl. ♀ Auf. 5 11 $\frac{3}{4}$ | | |
| | Alt. ♀ 28 5 | | |
| | altero 5 11 $\frac{1}{2}$ | | |

Sequentes obseruationes Solis sunt videndo medium ☉.

| | ♀ a ☉ | Decl. ☉ | Alt. ☉ per Radium |
|--------------------|-----------------------------|---------------------|----------------------|
| 3 41 $\frac{1}{2}$ | 43 36 $\frac{1}{2}$ | 20 0 | 1 0 |
| 3 45 | 43 33 $\frac{1}{2}$ | 19 58 $\frac{1}{2}$ | 0 40 |
| 3 48 $\frac{1}{2}$ | 43 32 | 19 56 $\frac{1}{2}$ | 0 30 |
| 3 51 $\frac{1}{2}$ | 43 31 | | |
| 3 52 35" | ☉ Med. occ. dist. a ♀ 43 29 | | |

Nota. Omnis hæc varietas tam in distantia quam declin. ☉ accidit saltem ratione refractionis ☉, quare hæc venit limitanda.

5 36 Inter ♀ & luc. ♀ 49 14 Alt. ♀ 20 $\frac{1}{2}$

5 39 5 Transiit Luc. ♀ per Mer. & habuit alt. 55 34 $\frac{1}{2}$ per volub. Hinc poterit verificari tempus.

5 39 $\frac{1}{2}$ ♀ a luc. ♀ 49 14 $\frac{1}{2}$ Alt. ♀ 19 $\frac{2}{3}$

5 43 Decl. ♀ vno
pinn. 5 9 $\frac{1}{2}$ M.
altero 5 9

5 49 ♀ a 49 14 5 8 M. 18 30

5 55 luc. ♀ 49 13 $\frac{1}{2}$ 5 8 18 0
alt. pinn. 5 8 $\frac{1}{4}$

Hinc verificetur locus ♀ pro ♀ obseruationibus habendo vtrunque respectum refractionis.

| ♀ occid. | Aldeb. or. | Dist. æquat. | Alt. ♀ |
|--|--------------------------|---------------------|--------------------------------------|
| 6 6 $\frac{1}{2}$ | 49 15 | 30 1 | 79 16 16 $\frac{3}{4}$ |
| 6 8 $\frac{1}{3}$ | 49 43 $\frac{1}{2}$ | 29 34 | 79 17 $\frac{1}{2}$ 16 $\frac{1}{2}$ |
| 6 10 $\frac{1}{2}$ | 50 7 | 29 9 | 79 16 16 $\frac{1}{4}$ |
| 6 11 $\frac{1}{3}$ | 50 28 | 28 48 $\frac{1}{2}$ | 79 16 $\frac{1}{2}$ 16 $\frac{1}{6}$ |
| Pone hic dist. æquat. ♀ et Aldeb. 79 16 $\frac{1}{2}$ | | | |
| 6 13 | Declin. ♀ vno pinn. 5 8 | 15 $\frac{5}{6}$ | |
| | altero 5 7 $\frac{3}{4}$ | | |

Postea obseruabatur ♀ dist. & decl. propter refractionem ♀ in consimili altitudine obseruati quærendam.

7 39 Declin. ♀ austr. 5 1 Alt. 5 29

7 41 $\frac{1}{2}$ 5 1 5 12 $\frac{1}{4}$

Postea accipiebatur distantia ♀ a Lucida ♀ in consimili fere situ quo ♀ prius obseruabatur & vna ipsius declinatio & altitudo, vt collatis his cum antecedentibus ♀ obseruationibus refractionis ☉ constare possit et per consequens etiam ♀ in simili altitudine.

| Dist. ♀ & luc. ♀ | Declin. ♀ | Alt. ♀ |
|--|--------------------|-----------------|
| 7 45 49 3 $\frac{1}{4}$ | | 4 44 |
| 7 47 $\frac{1}{2}$ 49 2 $\frac{1}{3}$ | 5 0 $\frac{1}{2}$ | 4 22 |
| 7 49 49 1 $\frac{1}{6}$ | 5 0 $\frac{1}{2}$ | 4 0 |
| 7 56 $\frac{3}{4}$ 48 59 $\frac{1}{2}$ | 4 57 $\frac{3}{4}$ | 3 0 |
| 7 58 $\frac{1}{2}$ 48 59 | | 2 55 |
| 8 0 48 58 | | 2 40 |
| 8 1 $\frac{1}{4}$ 48 56 $\frac{1}{4}$ | | 2 30 |
| 8 4 $\frac{3}{4}$ 48 55 $\frac{1}{2}$ | | 2 20 |
| 8 6 48 53 $\frac{3}{4}$ | 4 53 $\frac{1}{2}$ | 2 0 |
| 8 9 48 52 | | 1 40 |
| 8 10 $\frac{3}{4}$ 48 52 | | 1 30 |
| 8 12 $\frac{1}{2}$ 48 49 $\frac{1}{2}$ | | 1 $\frac{1}{4}$ |

DIE 14 JANUARIJ.

Obseruauimus inter ♀ & ☉.

| Dist. ♀ & ☉ | Alt. ☉ |
|---|--------|
| 12 18 42 11 $\frac{1}{2}$ | 14 46 |
| 12 20 $\frac{1}{2}$ 42 11 $\frac{2}{3}$ | 14 45 |
| 12 22 42 11 $\frac{1}{4}$ | 14 44 |
| 12 23 42 11 $\frac{1}{2}$ | 14 43 |

Pone itaque circa hoc tempus

42 11 $\frac{1}{2}$ et satis certo operaberis pro ♀ et Sole.

12 34 Decl. ♀ vno 3 12 $\frac{1}{2}$ M.

Repetita 3 11 $\frac{1}{2}$

12 40 Repetita alt.

pinn. 3 12 $\frac{1}{2}$ M.

Pone itaque decl. ♀ 3 12

& Solis visam decl. 19 15 insensibiliter

Fuit autem circa hæc tem-

pora Alt. ♀ 26 $\frac{1}{2}$

12 45 Alt. ♀ antemerid. 26 20 $\frac{1}{2}$

12 46 $\frac{1}{2}$ Az. ♀ or. 31 43 26 31 $\frac{1}{2}$

Declin. ♀ tunc 3 13 per Arm.

12 48 $\frac{3}{4}$ Az. or. 31 20 26 38 $\frac{3}{4}$

Postea denuo obseruabatur distantia Solis & ♀ per Sextantem in hunc modum.

| | Dist. ♀ a ☉ | Alt. ☉ | Alt. ♀ |
|---------------------|---------------------|--------|------------------|
| 12 51 | 42 11 | 14 5 | 27 fere |
| 12 53 $\frac{1}{2}$ | 42 11 | 14 2 | |
| 12 56 | 42 10 $\frac{5}{6}$ | 13 57 | |
| 12 58 $\frac{1}{2}$ | 42 10 $\frac{3}{4}$ | 13 52 | 27 $\frac{1}{4}$ |
| 1 0 $\frac{1}{2}$ | 42 10 $\frac{1}{2}$ | 13 48 | |
| 1 3 $\frac{1}{2}$ | 42 10 $\frac{1}{2}$ | | |

His obseruationibus Veneris ad Solem potes satis tuto te fundare, quod autem nunc propior factus Sol Veneri quam antea non ratione motus proprii fiebat, sed quia ☉ accedens ad occasum magis refractionem augebat, propiorque Veneri quam reuera erat videbatur. Potes autem in ipso Meridie constituere distantiam Solis & ♀ 42 gr. 12 M. exacte & adhibita vtriusque declinatione Venerisque loco per stellas nocturno tempore verificato quam primum haberi potest locus ☉ indagari vel etiam viceversa ex hac constitutione ♀ locus atque inde affixæ stellæ vt scis.

1 5 Declin. ♀ vno pinn. 3 12 $\frac{1}{2}$
altero 3 12 $\frac{1}{4}$

2 41 $\frac{1}{3}$ Transiit ♀ stella Merid. & habuit altitud.
per Volub. 30 55 $\frac{1}{4}$
per Tychon. 30 54 $\frac{1}{2}$
Pone altitud. max. 30 55

2 50 Declin. ♀ vno 3 10 $\frac{1}{2}$ aufst.
altero 3 10 $\frac{1}{4}$

Deinde ♀ a Sole rursus obseruabatur hoc modo per Sextantem.

| | Dist. ♀ a ☉ | Alt. ☉ | Alt. ♀ |
|----------------------------|--------------------|-----------------|---------------------|
| 3 2 | 42 4 $\frac{1}{8}$ | 6 5 | |
| 3 8 | 42 4 | 5 $\frac{1}{2}$ | |
| 3 9 | 42 3 $\frac{2}{3}$ | 5 25 | 30 42 |
| 3 13 | 42 3 $\frac{1}{4}$ | 4 50 | 30 33 $\frac{2}{3}$ |
| 3 15 $\frac{1}{6}$ | 42 3 $\frac{1}{2}$ | 4 40 | 30 30 |
| 3 16 $\frac{1}{6}$ Decl. ♀ | 3 10 | | |
| altero | 3 10 $\frac{1}{4}$ | | |
| 3 39 25" ♀ a ☉ | 41 57 | 2 $\frac{1}{2}$ | 29 44 $\frac{1}{2}$ |
| 3 42 30 ☉ | 41 56 | 2 $\frac{1}{6}$ | 29 35 $\frac{1}{2}$ |

Postea ♀ non amplius a Sole obseruabatur eo quod Sol horizonti ad-

modum vicinis nubeculis offuscaretur. Diuersitas autem quæ ab ante-meridiano tempore hucusque contingebat in distantia Solis & Veneris ratione refractionum solarium contingebat.

4 1 $\frac{1}{3}$ Declinatio ♀
repetita 3 8 $\frac{1}{2}$ Alt. ♀ fuit
Altero pinna- tunc fere
cidio 3 8 $\frac{3}{4}$ 28 p.

Postea obseruabatur ♀ a ♃ qui primo apparuit in hunc qui sequitur modum.

4 37 Declin. ♃ 23 27 $\frac{2}{3}$ Alt. ♃
altero 23 27 $\frac{1}{2}$ 23 43
4 42 Declin. ♀ 3 7 $\frac{1}{3}$ Alt. ♀
altero 3 7 $\frac{1}{3}$ 26 0

Sed quia ♃ interea apparebat eius potius a Venere distantiam scrutati sumus in hunc qui sequitur modum per Sextantem.

| | Dist. inter ♀ & ♃ | Alt. ♀ | Alt. ♃ |
|--------------------|---------------------|--------|--------|
| 4 46 $\frac{1}{2}$ | 40 19 $\frac{1}{4}$ | 25 30 | 41 36 |
| 4 48 $\frac{1}{2}$ | 40 19 | 25 20 | 41 37 |
| 4 50 | 40 19 | 25 15 | 41 39 |
| 4 55 | 40 19 | 24 40 | 41 54 |

Hæ obseruationes sunt satis exactæ pro loco ♀ a Saturno restituendo examinandoque, assumatur itaque distantia vtriusque per Sextantem 40 gr. 19 M. et declinatio e præcedentibus.

| | | Alt. ♀ |
|-------------------|--------------------------|------------------|
| 4 58 Inter ♀ & ☉ | 45 51 $\frac{1}{3}$ | 24 $\frac{1}{2}$ |
| 5 2 luc. ♃ | 45 51 | 24 |
| 5 4 | 45 51 | 23 $\frac{1}{2}$ |
| 5 5 $\frac{1}{2}$ | 45 51 | 23 $\frac{1}{2}$ |
| 5 9 Declin. ♀ | | |
| vtroque | 3 6 $\frac{1}{4}$ aufst. | |

DIE 15 JANUARIJ P. M.

Obseruauimus ♀ a Sole in hunc qui sequitur modum.

| | | |
|----------------|---------------------|--------------|
| 1 30 ♀ a ☉ | 41 47 $\frac{1}{4}$ | Alt. ☉ 12 40 |
| 1 35 per Sext. | 41 46 $\frac{1}{2}$ | per ♀ 12 25 |
| 1 38 | 41 46 | min. 12 10 |
| 1 41 | 41 46 | 12 0 |
| 1 50 | 41 45 | 11 25 |
| 1 54 | 41 44 $\frac{3}{4}$ | 11 15 |

Postea per Armillas accepimus
declinationem ♀.

2 1 Decl. ♀

vno 2 48 $\frac{1}{3}$ M.

2 5 alt. pin. 2 48

Postea rursus accipiebatur ♀
a Sole per Sext.

2 8 ♀ a ☉ 41 44 10 23

2 10 41 44 10 15

2 13 Decl. ☉

vifa 18 58 $\frac{1}{2}$

alt. pinn. 18 57

Pone 18 58 $\frac{3}{4}$ et confer eam
proportionaliter cum meridiana.

2 20 ♀ a ☉ 41 43 $\frac{3}{4}$ 9 40

2 22 $\frac{1}{2}$ 41 43 $\frac{1}{4}$ 9 25

2 26 41 42 $\frac{1}{2}$ 9 0

2 29 41 42 $\frac{1}{8}$ 8 50

2 30 $\frac{1}{2}$ Decl. ☉ 18 56

altero 18 56 $\frac{1}{8}$

2 35 Decl. ♀ 2 48 vt prius

2 37 40'' Transiit stella Veneris per
Mer., & habuit Alt.

per ♀. Volub. 31 18 $\frac{1}{8}$

Per Mural. super. 31 18

2 40 $\frac{1}{2}$ Decl. ♀

vno 2 48

2 43 $\frac{1}{2}$ altero 2 48 $\frac{1}{4}$ Fuit tunc

2 45 ☉ 18 55 $\frac{1}{4}$ Alt. ☉ 7 45

2 49 18 55 $\frac{1}{8}$

Postea repetebatur distantia Solis
& ♀ per Sextantem.

2 51 $\frac{1}{2}$ ♀ a ☉ 41 41 7 10

2 54 $\frac{1}{2}$ 41 40 $\frac{1}{2}$ 6 40

2 57 41 40 $\frac{1}{4}$ 6 13

3 3 41 40 5 50

3 5 41 39 $\frac{1}{2}$ 5 40

Patet hinc quod ♀ propior sit facta ☉
quam heri 24 M.

Ex his poterint ♀ & ☉^{is} loca rimari,
habita ratione refractionum Altit. ♀
die præcedente.

Repetita distantia

3 12 ☉ & ♀ 41 38 $\frac{1}{2}$ Alt. ☉ 5 0

3 25 41 36 $\frac{3}{4}$ 3 30

3 28 Melior 41 36 $\frac{1}{2}$ 3 20

3 30 $\frac{1}{2}$ 41 36 3 15

3 32 41 35 $\frac{1}{2}$ 3 5

3 34 41 35 2 52

Postea obseruabatur declinatio So-
lis ob refractionem eius addiscen-
dam hoc modo.

3 35 18 48 $\frac{1}{4}$ 2 45

3 38 18 47 $\frac{1}{2}$ 2 30

Postea rursus ♀ a Sole in dist. per
Sextantem.

3 40 $\frac{1}{2}$ 41 33 $\frac{1}{2}$ 2 15

3 43 41 31 $\frac{3}{4}$ 2 0

3 45 41 30 $\frac{1}{2}$ 1 45

3 47 $\frac{1}{2}$ 41 29 $\frac{1}{4}$ 1 30

Postea non amplius videbatur ☉
sele in nubibus prope horizontem
abcondens.

3 52 Decl. ♀ 2 45 $\frac{1}{2}$ Mer. Alt. ♀ 29 $\frac{1}{8}$

altero 2 45 $\frac{1}{8}$

Postea obseruabatur ♀ & ☉ hoc modo.

Inter ☉ & ♀ dist. æquat.

4 6 $\frac{1}{2}$ 110 52 $\frac{3}{4}$

4 10 110 53 Altit. ♀ Altit. ☉

4 11 $\frac{1}{2}$ 110 53 $\frac{1}{8}$ 28 18 $\frac{1}{8}$ 20 10

4 13 110 53 $\frac{1}{16}$ 28 12 20 20

4 15 $\frac{1}{2}$ 110 53 $\frac{1}{8}$ 28 4 20 35

4 17 110 53 $\frac{1}{16}$ 27 57 20 50

4 19 110 53 $\frac{1}{4}$ 27 50 21 15

4 20 $\frac{1}{2}$ 110 53 bis 27 42 21 45

Pone 110° 53' 5''

4 25 Decl. ♀ vno 2 44 $\frac{1}{8}$

altero 2 45

Postea obseruabatur ♀ a ☉^{no} per
Sextantem.

4 38 $\frac{1}{2}$ ♀ a ☉ 39 48 2 44 $\frac{1}{2}$ 26 25

Altitudo ☉ erat vltra 41 grad.

4 41 39 48 $\frac{1}{2}$ 2 44 $\frac{1}{2}$ 26 12 $\frac{1}{2}$

4 43 39 47 $\frac{1}{2}$ 2 44 26 4

4 46 39 47 $\frac{1}{4}$ 2 44 25 47

4 48 39 47 $\frac{1}{2}$ 2 44 25 37

4 50 $\frac{1}{2}$ 39 47 $\frac{1}{4}$ 2 44 25 24

Pone itaque veram distantiam ♀ et
☉ circa hoc tempus per Sextant. ac-
ceptam 39 47 $\frac{1}{2}$. Nam posteriores sunt
veriores prioribus, tum quod pinna-
cidia tunc eßent arcuiores, tum etiam,
quia melius videbatur ☉ quam antea.

♀ occid. ☉ orient. Dist. æquat.

4 53 33 55 4 29 $\frac{3}{4}$ 38 24 $\frac{3}{4}$

4 55 34 24 $\frac{1}{2}$ 4 0 38 24 $\frac{1}{2}$

4 57 34 53 3 30 $\frac{1}{2}$ 38 23 $\frac{1}{2}$

Examen harum obseruationum.

| | |
|-------|---------|
| ♀ & ♄ | 38 24½ |
| ♄ & ♀ | 72 28 |
| Summa | 110 52½ |

At prius præbuit idem instrumentum distantiam æquatoriam ♄ & ♀ 110 53 quod satis conuenit. Altit. ♀ circa has obseruationes 24½.

Postea obseruabatur ♀ a Lucida ♀ per Sextantem

| | Inter ♀ & luc. ♀ | Declin. ♀ | Altit. ♀ |
|-------|------------------|-----------|----------|
| 5 32½ | 45 12¾ | 2 45 M. | 21 20 |
| 5 35 | 45 12¾ | 2 44 | 21 0 |
| 5 38 | 45 12¾ | 2 44 | 20 40 |

DIE 16 JANUARIJ P. M.

Circa H. 2½ obseruabatur ♀ in Azim. occ. 3 15, Alt. 31 40

2 51½ Decl. ♀ vno 2 24 Mer. altero 2 23

Pone itaque veram declinat. 2 23½

2 53 4" Azim. ♀ occ. 5 18 Alt. 31 35
Postea obseruabatur ♀ a ☉^{1e}. vera
Altitudines sequentes ♀ sunt limitatæ

| | Inter ♀ & ☉ | Alt. ☉ | Azim. ♀ | Alt. ♀ |
|-------|-------------|--------|---------|--------|
| 2 57 | 41 15¾ | 6 30 | 6 35 | 31 31 |
| 2 59¾ | 41 15 | 6 20 | | |
| 3 2½ | 41 14 | 6 5 | 7 55 | 31 27 |
| 3 5½ | 41 13¾ | 5 45 | 8 55 | 31 22 |
| 3 8½ | 41 13½ | 5 30 | 9 44 | 31 18 |
| 3 11 | 41 13 | 5 10 | | |
| 3 14 | 41 12¾ | 5 0 | 11 17 | 31 12 |
| 3 18 | 41 12½ | 4 35 | 12 40 | 31 2½ |
| 3 26 | 41 11¾ | 3 50 | | |

Postea ♀ a ☉ paulo alia ratione vt sequitur.

| | | | | |
|-------|--------|------|-------|-------|
| 3 29 | 41 11 | 3 30 | 15 45 | 30 42 |
| 3 32 | 41 10¾ | 3 10 | 16 30 | 30 35 |
| 3 35 | 41 10 | 2 50 | 17 17 | 30 28 |
| 3 39 | 41 9¾ | 2 40 | 18 30 | 30 16 |
| 3 45½ | 41 7 | 2 5 | 20 26 | 30 0 |
| 3 49 | 41 5 | 1 30 | 21 24 | 29 49 |
| 3 51¾ | 41 3½ | 1 15 | 22 7 | 29 41 |
| 3 54½ | 41 2½ | 1 0 | 22 53 | 29 32 |
| 3 57¾ | 41 0 | 0 35 | 23 45 | 29 23 |

¹ Vide supra inter obseruationes Iouis, p. 174.

| Decl. ☉ | | | |
|---------|--------|-------|--------|
| 3 26 | 18 35½ | 3 39 | 18 30½ |
| 3 29 | 18 34 | 3 45½ | 18 29 |
| 3 32 | 18 32½ | 3 51¾ | 18 23½ |
| 3 35 | 18 31¾ | 3 54½ | 18 22½ |
| | | 3 57¾ | 19 20 |

4 2 Decl. ♀ austr. 2 22 Altit. ♀ 29 3
Altero 2 22½

Postea obseruabatur æquatoria distantia ♄ & ♀ per Armillas.

| | Dist. ♀ & ♄ | Altit. ♄ | Altit. ♀ |
|-------|-------------|----------|----------|
| 4 23 | 110 19 | 22 45 | 27 46 |
| 4 25 | 110 19 | 23 5 | 27 36 |
| 4 27 | 110 19½ | 23 15 | 27 28 |
| 4 30 | 110 19 | 23 40 | 27 15 |
| 4 33½ | 110 18¾ | 24 20 | 26 58 |
| 4 35 | 110 19 | 25 35 | 26 51½ |

Patet itaque quod distantia æquatoria ♄ & ♀ sit 110 19 exacte.

4 36 Decl. ♀ merid. 2 21¾
altero 2 21½
ergo 2 21½

Postea accipiebatur dist. ♀ & ♄ per Sextantem.

| | Dist. ♀ a ♄ | ♄ a Mer. or. | Altit. ♀ |
|-------------|-------------|--------------|----------|
| 4 44½ | 39 17½ | 5 30½ | 26 10 |
| 4 46¾ | 39 17¾ | | |
| 4 49 | 39 17½ | 4 33½ | 25 45 |
| 4 52 | 39 17 | 3 46 | 25 28 |
| 4 57 | 39 17 | 2 39½ | 25 4 |
| 4 59 | 39 16½ | 2 11 | 24 54 |
| 5 2 Decl. ♀ | | 2 21 M. | |

| | ♀ occid. | ♄ occid. | Dist. æquat. |
|-------|----------|----------|--------------|
| 5 37 | 45 27 | 7 28 | 37 59 |
| 5 39 | 45 57 | 7 56½ | 38 0½ |
| 5 40½ | 46 16 | 8 16½ | 37 59½ |
| 5 43 | 46 56 | 8 56½ | 37 59½ |

Pone dist. æquat. ♀ et ♄ 38 0

Pone ♄ et ♄ 72 18¹

Distantia ♀ et ♄ 110 18

quod fere conuenit cum superioribus
Altitudo ♀ circa has obseruationes 20 grad.

Horologium in mer. seq. celerius iusto ibat 1 M. 30 S. Fuit in Meridie proxime antecedenti correctum.

DIE 17 JANUARIJ.

5 6 Vesper. Declin. ♀ auf. 1 57
vstroque pinn. Altit. ♀ 24½

| | Diff. æquat. ♀ & ☿ | Altit. ☿ | Altit. ♀ |
|----------------|-----------------------|----------|----------|
| 5 14 | 109 45 | | |
| 5 16½ | 109 44¾ | 31 15 | 23 9 |
| 5 20 | 109 45 | 31 55 | 22 55 |
| 5 22 | 109 45 | 32 5 | 22 40 |
| 5 24½ | 109 44¾ | 32 20 | 22 15 |
| 5 32 Decl. ♀ | | 1 56 | 21½ |
| alt. pin. 1 56 | | | |

DIE 20 JANUARIJ.

Propter refractionem ♀ in decliui
fitu cognoscendam obseruabatur ei-
us distantia a ☿. Ex craftino loco ♀ &
☿ cum sublimiores fuerunt, refractione
♀ indagari potest.

| Diff. a ☿ no | Altit. ♀ | Declin. ♀ |
|--------------|----------|-----------|
| 37 26 | 4 50 | 0 40 |
| 37 23¼ | 3 20 | 0 37 |
| 37 22¼ | 2 50 | 0 35½ |
| 37 20½ | 2 40 | 0 34¾ |
| 37 20 | 2 25 | 0 34½ |
| 37 18¾ | 2 0 | 0 34¼ |
| 37 18 | 1 45 | 0 32 |

exactior
prior
Hæ sunt
bonæ

DIE 24 JANUARIJ.

Sequuntur bonæ obseruationes ♀ ris.

N. B. ♀ bene ante ipsam Meridiem
vidimus adeo vt per Armillas a Sole
obseruari potuerit in hunc qui sequi-
tur modum.

| | ♀ orient. | ☉ orient. | Diff. æquat. |
|-------|-----------|-----------|--------------|
| 11 45 | 37 11½ | 3 44¾ | 33 26¾ |
| 11 47 | 36 39 | 3 12¼ | 33 26¾ |
| 11 49 | 36 10½ | 2 46 | 33 24½ |
| 11 50 | 35 50¾ | 2 26½ | 33 24¼ |
| 11 53 | 35 30 | 2 5 | 33 25 |
| 11 55 | 35 9¾ | 1 44¾ | 33 25 |

Pone itaque absque vnus Minuti
dispendio diff. Asc. R. Solis & ♀
33 26

erant enim posteriores obseruationes
exactiores.

¹ Postea adscriptum.

Postea capiebatur declinatio ♀ ris
hoc modo.

11 57 Declinatio ♀ vno pinn. 0 24½ B.
altero 0 24½

Pone itaque
veram declinat. 0 24½
Declinatio ☉
in Merid. erat 16 35 Mer.

12 6 Inter ♀ et ☉ per Sext. 37 7½
dubia

| | |
|--------|------------|
| 12 8¼ | II 37 6½ |
| 12 11 | III 37 6 |
| 12 12½ | IV 37 6 |
| 12 14 | V 37 5 |
| 12 16 | VI 37 6 |
| 12 17 | VII 37 6½ |
| 12 19½ | VIII 37 5¾ |
| 12 21 | IX 37 5 |
| 12 22½ | X 37 5½ |

Potes itaque absque omni sensibili
errore circa horam 12½ uti distantia ♀
& Solis 37 6
exacte, et diff. Asc. R. hinc proueni-
entem conferre cum antecedenti per
Armillas habitam.

(Concordat melius si ponas 37 5½)¹

12 26¼ Repetebatur

decl. ☉ vno 16 34½
12 27½ altero pinn. 16 34½
1 31 Declin. ♀ 0 26 Bor.
1 33 altero pinn. 0 25½
Pone itaque
declin. ♀ 0 25¾ Bor.

Altit. ☉
1 34 Declinat. ☉ 16 33 14 50
altero pinn. 16 32¾

| | ♀ or. | ☉ occ. | Diff. æquat. | Altit. |
|-------|-------|--------|--------------|---------|
| 1 37½ | 9 4½ | 24 18 | 33 22½ | |
| 1 39 | 8 49½ | 24 33 | 33 22½ | ♀ 34 2½ |
| | 8 11½ | 25 10 | 33 21½ | ☉ 14½ |
| 1 42 | 7 55¾ | 25 26 | 33 21½ | 14¾ |
| | 7 33½ | 25 47¾ | 33 21 | |
| 1 45 | 7 10 | 26 11½ | 33 21½ | 14 |
| 1 47½ | 6 31¾ | 26 50½ | 33 22 | |

Pone diff. æquat.
Solis & ♀ H. 1¾ 33 22 certo

Postea per Sext. obseruabatur Venus a Sole.

| | Inter ☉ & ♀ | Declin. ☉ | Altit. ☉ |
|------|--------------------|---------------------|----------|
| 1 51 | 37 2 $\frac{1}{4}$ | 16 32 $\frac{2}{3}$ | 13 50 |
| 1 53 | 37 2 $\frac{1}{6}$ | 16 32 $\frac{1}{2}$ | 13 40 |
| 1 57 | 37 2 | 16 32 $\frac{1}{2}$ | 13 30 |
| 2 1 | 37 1 $\frac{3}{4}$ | 16 31 $\frac{3}{4}$ | 13 15 |
| 2 4 | 37 1 $\frac{1}{2}$ | 16 31 $\frac{2}{3}$ | 13 5 |
| 2 8 | 37 1 | 16 31 $\frac{2}{3}$ | 12 50 |

Pone dist. ♀ & ☉ circa H. 2 37 2

| | |
|--------------------|---------------------------------------|
| 2 15 $\frac{1}{4}$ | Transiit ♀ per Merid. habens |
| | Altit. per Volub. 34 31 $\frac{3}{4}$ |
| | per Tychonicum 34 30 40" |
| | per Sextantem 34 31 $\frac{1}{4}$ |
| | Declinatio ♀ cum |
| | eſſet iuxta Merid. 0 26 B. |
| | altero pinnacidio 0 26 $\frac{1}{2}$ |

| Dist. ☉ & ♀ | Decl. ☉ | Altit. ☉ | Altit. ♀ |
|--------------------|---------------------|---------------------|---------------------------|
| 2 27 $\frac{1}{2}$ | 36 59 $\frac{5}{6}$ | 16 30 $\frac{2}{3}$ | 11 15 34 27 $\frac{3}{4}$ |
| 2 33 | 36 59 $\frac{2}{3}$ | 16 30 $\frac{1}{2}$ | 10 50 34 23 $\frac{1}{2}$ |
| 2 37 | 36 59 | 16 30 $\frac{1}{3}$ | 10 30 34 19 |
| 2 41 | 36 58 $\frac{1}{2}$ | 16 30 | 10 15 34 16 $\frac{1}{2}$ |
| 2 45 | 36 58 | 16 29 $\frac{3}{4}$ | 9 45 34 11 $\frac{3}{4}$ |
| 2 49 | 36 57 $\frac{1}{3}$ | 16 29 $\frac{1}{6}$ | 9 30 34 5 |
| 2 52 | 36 57 | 16 28 $\frac{2}{3}$ | 9 20 34 2 $\frac{1}{2}$ |

Nota. Hæ distantia per Sextantem Veneris a Sole non fuerunt ita reſſe veritate variatæ, ſed refractio ſaltem hanc peperit ob Solem horizonti magis magisque appropinquantem. Potes itaque has conferre cum ceteris, habita ratione refractionis ☉ & parallaxeos tum ☉ tum ♀, quatenus hæc interea mutatur.

2 56 Decl. ♀ vno 0 26 $\frac{1}{4}$ Bor.

alt. pinn. 0 26 $\frac{1}{6}$

4 27 Decl. ♀ B. 0 28 Altit. ♀

alt. pinna. 0 28 $\frac{1}{4}$ 28 29

Postea obseruabatur dist. æquat. ♄ & ♀ in hunc qui sequitur modum per armillas maiores subterraneas.

| | ♄ orient. | ♀ occid. | Dist. æquat. | Altit. ♄ | Altit. ♀ |
|--------------------|---------------------|---------------------|----------------------|----------|----------|
| 4 36 $\frac{1}{2}$ | 71 2 | 35 43 $\frac{1}{4}$ | 106 45 $\frac{1}{4}$ | 29 40 | 27 33 |
| 4 39 | 70 24 $\frac{3}{4}$ | 36 20 $\frac{1}{8}$ | 106 45 | 30 5 | 27 19 |
| 4 41 | 69 54 | 36 51 $\frac{5}{6}$ | 106 45 $\frac{5}{6}$ | 30 20 | 27 7 |
| 4 43 $\frac{1}{2}$ | 69 16 $\frac{3}{4}$ | 37 27 | 106 43 $\frac{3}{4}$ | 30 40 | 26 53 |
| 4 46 $\frac{1}{2}$ | 68 31 $\frac{3}{4}$ | 38 13 $\frac{1}{2}$ | 106 45 $\frac{1}{4}$ | 31 0 | 26 35 |
| 4 49 | 67 53 $\frac{2}{3}$ | 38 52 $\frac{1}{6}$ | 106 46 | 31 30 | 26 20 |
| 4 51 | 67 22 $\frac{3}{4}$ | 39 22 $\frac{1}{2}$ | 106 45 $\frac{1}{4}$ | 31 45 | 26 7 |
| 4 53 $\frac{1}{2}$ | 66 43 $\frac{1}{2}$ | 40 2 $\frac{1}{2}$ | 106 46 | 32 10 | 25 53 |

Pone itaque circa horam 4 $\frac{3}{4}$ dist. ♄ & ♀ 106 45 $\frac{1}{2}$
vel ob refractionem 106 46

| | |
|----------------------|------------------|
| 4 55 Decl. ♀ B. 0 29 | Alt. ♀ |
| altero 0 29 | 25 $\frac{1}{2}$ |

Postea obseruabatur ♀ a ♄ in hunc qui sequitur modum.

| | |
|-------------------|---|
| 5 2 Dist. ♀ | |
| & ♄ | 36 24 $\frac{1}{2}$ 25 3 |
| 5 4 per Sext. | 36 24 $\frac{1}{4}$ 24 51 $\frac{1}{2}$ |
| 5 5 $\frac{1}{2}$ | 36 24 $\frac{1}{2}$ 24 40 $\frac{1}{2}$ |
| 5 6 $\frac{3}{4}$ | 36 24 $\frac{1}{2}$ 24 33 |

Postea obseruabatur ♀ a Lucida ♀ in hunc modum per Sextantem.

| | | |
|--------------------|---------------------|---------------------|
| 5 11 ♀ a. luc. ♀ | 40 46 | 24 6 $\frac{1}{2}$ |
| 5 13 | 40 46 $\frac{1}{3}$ | 23 54 |
| 5 14 $\frac{1}{2}$ | 40 46 $\frac{1}{6}$ | 23 41 $\frac{1}{2}$ |
| 5 16 $\frac{1}{2}$ | 40 46 | 23 24 |

N. B. His obseruationibus Veneris ad Solem diurno tempore factis tam ante quam post Meridiem & postea sole jam occiduo ♀ ad Iouem quam primum apparuit et postea ♄ ad Aldeb. & infer. cap. II, adhibito etiam ♄ & luc. ♀ in consilium, potes satis tuto te fundare in constituendis fixarum locis, siue viceversa ex his Solem & planetas habita vbique ratione refractionis & parallaxeos, vbi opus fuerit.

5 48 Decl. ♀ 0 30 B. Altit. ♀ 17 $\frac{1}{2}$

DIE 26 JANUARIJ.

2" 7' 8" ♀ per Merid. & habuit Alt.
per Q. Volub. 35 7
Q. Tychon. 35 7 $\frac{3}{4}$

*Hæc varietas incuria obseruato-
rum accidit ob Venerem non satis
bene conspectam. Pone 35 7 $\frac{1}{2}$ infalli-
biliter.*

2 17 $\frac{1}{8}$ Declinat. ♀ 1 0 $\frac{1}{4}$ B.
altero 1 0 $\frac{1}{2}$

| | ♀ a ☉ per Sext. | Declin. ☉ | Altut. ☉ |
|--------------------|-----------------------|--|-----------------|
| 2 27 | 35 35 $\frac{1}{2}$ | 15 55 $\frac{1}{2}$ | 11 50 |
| 2 33 | 35 35 $\frac{1}{4}$ | 15 55 $\frac{1}{2}$ | 11 10 |
| 2 36 | 35 34 $\frac{2}{3}$ | 15 55 $\frac{1}{3}$ | 11 0 |
| 2 46 | 35 34 $\frac{1}{2}$ | 15 54 $\frac{3}{4}$ | 10 5 |
| 2 55 | 35 34 | 15 54 $\frac{1}{3}$ | 9 20 |
| 3 2 | 35 33 $\frac{3}{4}$ | 15 54 | 8 50 |
| 3 10 | 35 33 | 15 53 $\frac{1}{6}$ | 8 0 |
| 3 12 | 35 32 $\frac{3}{4}$ | 15 52 $\frac{2}{3}$ | 7 45 |
| 3 14 | 35 33 | 15 52 $\frac{1}{2}$ | 7 30 |
| 3 19 | 35 32 | 15 52 | 6 50 |
| 3 24 $\frac{1}{3}$ | Decl. ♀ vno altero | 1 2 $\frac{1}{2}$ 1 2 $\frac{3}{4}$ | Alt. ♀ 32 55 |
| | ♀ a ☉ Decl. ☉ | Alt. ☉ | |
| 3 34 | 35 30 | 15 50 $\frac{3}{4}$ | 5 15 |
| 3 37 | 35 29 $\frac{1}{2}$ | 15 50 | 5 0 |
| 3 39 $\frac{1}{2}$ | 35 29 $\frac{1}{2}$ | | 4 45 |
| 3 42 | 35 27 $\frac{2}{3}$ | | 4 35 |
| 3 44 | 35 27 $\frac{1}{2}$ | | 4 20 |

3 47 $\frac{1}{8}$ Fuit tunc
Decl. ♀ 1 3 $\frac{1}{2}$ Alt. ♀ per
Volub.
altero 1 3 $\frac{1}{4}$ 31 33

*Postea accipiebatur æquatoria dist.
♂ & ♀ cum fere essent in æquali alti-
tudine. ♂ or. ♀ occ. Dist. æquat. Alt. ♀*

| | | | | |
|--------------------|-------|---------------------|----------------------|------------------|
| 4 37 | 68 35 | 37 33 | 106 8 | 27 $\frac{1}{8}$ |
| 4 39 | 67 59 | 38 11 $\frac{3}{4}$ | 106 10 $\frac{2}{8}$ | 27 $\frac{1}{8}$ |
| 4 41 $\frac{1}{2}$ | 67 30 | 38 39 $\frac{1}{2}$ | 106 9 $\frac{1}{2}$ | |

Serenior prioribus.

4 43 $\frac{1}{2}$ 66 56 $\frac{3}{8}$ 39 12 106 8 $\frac{2}{8}$ bona 27

Postea erat melius serenum.

4 46 66 24 39 45 $\frac{1}{8}$ 106 9 $\frac{1}{8}$ melior 26 $\frac{3}{8}$
4 48 65 53 $\frac{1}{8}$ 40 16 $\frac{1}{8}$ 106 9 $\frac{1}{2}$ 26 $\frac{1}{8}$

*Pone itaque circa horam 4 $\frac{3}{4}$ dist.
æquat. ♂ & ♀ 106 9 $\frac{1}{4}$ insensi-
biliter*

| | | |
|------------------|--------------------|------------------|
| 4 51 Declin. ♀ 1 | 4 $\frac{1}{8}$ | 26 |
| altero 1 | 4 $\frac{1}{4}$ | |
| 5 16 ♀ a h | 36 0 $\frac{5}{8}$ | 23 |
| 5 23 per Sext. | 36 0 $\frac{3}{4}$ | |
| 5 29 ♀ a luc. √ | 40 6 | 22 |
| 5 34 | 40 6 $\frac{1}{8}$ | 21 $\frac{3}{8}$ |

Horologium in Meridie proxime fe-
quenti 0 M. 15 S. citius saltem ibat,
obseruato transitu ☉ per Meridianum
per pinnacidia Q. volubilis medium
corpus ☉ aspiciendo.

DIE 27 JANUARIJ P. M.

4 53 Declin. ♀ vno pinn. 1 22 $\frac{1}{2}$ B. Alt.
altero 1 22 $\frac{1}{8}$ 24 $\frac{3}{8}$

Per Armillas æquatorias.

| | ♀ occid. | ♂ orient. | Dist. æquat. | Alt. |
|------|---------------------|---------------------|----------------------|--------------------|
| 5 3 | 44 32 $\frac{1}{8}$ | 61 25 $\frac{1}{2}$ | 105 57 $\frac{5}{8}$ | ♂ 35 |
| 5 5 | 45 11 $\frac{3}{4}$ | 60 45 $\frac{1}{8}$ | 105 57 | ♀ 24 $\frac{1}{2}$ |
| 5 14 | 47 20 | 58 36 $\frac{1}{2}$ | 105 56 $\frac{1}{2}$ | ♀ 23 $\frac{1}{2}$ |

Pone itaque

dist. æquat. 105 57

5 19 Repetita Declin. ♀ 1 22 ♀ 23

altero pinnacidio 1 22 $\frac{1}{2}$

Quando alt. ♀

erat 19 $\frac{1}{2}$ distabat

♀ a lucida √ 39 50

Fuit tunc Hora

quasi 5 $\frac{1}{4}$ 39 49 $\frac{1}{2}$ Alt. ♀

6 20 Inter ♀ et luc. √ 39 48 $\frac{1}{8}$ 15 50
6 25 39 47 $\frac{1}{2}$ 15 0

DIE 28 JANUARIJ.

Postea¹ obseruabatur ♀ a ☉ hoc modo.

| | |
|---------------------|----------------------------------|
| 12 18 Inter ♀ a ☉ | 34 15 |
| 12 20 per Sext. | 34 16 $\frac{1}{2}$ ² |
| 12 22 | 34 15 |
| 12 24 | 34 14 bene |
| 12 25 $\frac{1}{4}$ | 34 13 $\frac{3}{4}$ |

*Insensibiliter aberrabis si posueris
distantiam Solis a Venere hoc tem-
pore 34 14 $\frac{1}{2}$*

12 30 $\frac{1}{2}$ Declinatio ♀ 1 35 $\frac{1}{2}$ B.

Repetita 1 34 $\frac{1}{2}$ melior

¹ Id est, post obseruationes Solis.

² Lineis inducta.

DIE 30 JANUARIJ.

Obferuatio ♀ interdiu.

N. B. Ante Meridiem videbatur ♀ aliquo modo et obferuabatur a Sole antequam Sol Meridiem attigisset hoc modo.

10 5 Declinatio ♀ Borea 2 2 $\frac{1}{2}$ (Non licuit declinationem nisi unico pinnacidio accipere).

| | ♀ | ☉ | Diff. | Altit. |
|---------------------|---------------------|---------------------|---------------------|------------------|
| | orient. | orient. | æquat. | ☉ |
| 10 39 $\frac{1}{2}$ | 48 2 $\frac{1}{4}$ | 19 48 | 28 14 $\frac{1}{4}$ | 17 |
| 10 43 $\frac{1}{2}$ | 47 4 $\frac{1}{4}$ | 18 48 $\frac{1}{2}$ | 28 15 $\frac{3}{4}$ | 17 $\frac{1}{2}$ |
| 10 49 | 45 38 $\frac{1}{2}$ | 17 24 $\frac{1}{4}$ | 28 14 $\frac{1}{4}$ | 17 $\frac{3}{8}$ |
| 10 51 $\frac{1}{2}$ | 45 3 $\frac{1}{8}$ | 16 47 $\frac{1}{2}$ | 28 15 $\frac{5}{8}$ | 17 $\frac{5}{8}$ |
| 10 56 | 43 52 $\frac{1}{4}$ | 15 37 $\frac{1}{4}$ | 28 15 | 18 |

Nota. ☉ erat circa hæc tempora in 90 gradu vel prope, ideoque nullam caufabat parallaxin longitudinis.

Si pofueris diff. æquatoriam a Sole 28 15 infenfibiler aberrabis

| | | |
|----------------------|---------------------|--------|
| 11 2 Declin. ♀ B. | 2 3 | Alt. ☉ |
| 11 8 Inter ♀ et ☉ | 32 39 $\frac{2}{5}$ | 18 30 |
| 11 11 per Sext. Vet. | | |

| | | |
|---------------------|---------------------|-------|
| | 32 40 $\frac{1}{4}$ | 18 35 |
| 11 13 | 32 40 $\frac{1}{2}$ | 18 40 |
| 11 15 $\frac{1}{2}$ | 32 40 $\frac{1}{2}$ | 18 45 |
| 11 18 $\frac{1}{2}$ | 32 40 $\frac{3}{8}$ | |
| 11 26 | 32 40 | |
| 11 29 $\frac{1}{2}$ | 32 40 $\frac{5}{8}$ | |
| 11 31 $\frac{1}{2}$ | 32 40 | |

Si itaque pofueris hora 11 M. 30 diff. Solis a ♀ per Sext. 32 40 $\frac{1}{2}$ infenfibiler aberrabis

| | |
|-------------------|---------------------|
| 11 38 Decl. ♀ B. | 2 3 |
| 11 40 Decl. ☉ vno | 14 45 $\frac{1}{6}$ |
| 11 41 altero | 14 45 $\frac{1}{4}$ |

Nota. Horologium in Meridie fequenti faltem vno minuto et 5 fecundis iulto tardius mouebatur.

| | |
|--------------------|---------------------|
| 12 5 Diff. ♀ & ☉ | 32 38 |
| 12 7 $\frac{1}{2}$ | 32 37 $\frac{2}{3}$ |
| 12 9 | 32 38 $\frac{1}{2}$ |
| 12 13 | 32 38 |

Pone hora 12 $\frac{1}{2}$

| | | |
|-------------------|-------------------|-------------------------|
| | diff. ♀ & ☉ | 32 38 $\frac{1}{4}$ |
| 1 39 Fuit Decl. ♀ | 2 6 $\frac{1}{4}$ | Alt. ♀ 36 $\frac{1}{2}$ |
| Repetita | 2 5 | melior |
| Repetita | 2 5 | bona |

Pone itaque declinationem ♀ cum ad merid. appro-

| | | | |
|-------------------------------|---------------------|-------------|--|
| pinquaret | 2 5 | | |
| 1 49 Inter ♀ & ☉ | 32 33 $\frac{5}{6}$ | Alt. ☉ | |
| 1 51 $\frac{1}{4}$ per Sext. | 32 33 $\frac{1}{2}$ | 15 40 | |
| 1 52 $\frac{1}{2}$ tranfuit ♀ | | | |
| per Merid. in Alt. | 36 11 $\frac{3}{4}$ | per Volub., | |

bona

36 11 per Muralem

| | | |
|----------------------------|--------------------------------|-------------|
| Pone | 36 11 $\frac{1}{2}$ | |
| 1 54 $\frac{1}{4}$ Decl. ♀ | 2 5 $\frac{1}{4}$ per Armillas | |
| ♀ a ⊙ | Alt. tit. ⊙ | Alt. tit. ♀ |

| | ♀ a ☉ | Altit. ☉ | Altit. ♀ |
|----------------|-------|----------|----------|
| per Sext. vet. | | | |
| 1 57 | 32 33 | 15 10 | |
| 2 0 | 32 33 | 15 0 | |

Per Sext. nouum

| | | | |
|-------------------|---------------------|-------|------|
| 2 5 | 32 32 $\frac{1}{2}$ | 14 50 | 36 7 |
| 2 8 $\frac{1}{2}$ | 32 32 | 14 30 | 36 5 |
| 2 14 | 32 31 $\frac{1}{2}$ | 14 10 | 36 1 |

Rurfus per Sext. vet.

| | | | |
|--------------------|---------------------|-------|-------|
| 2 18 | 32 32 $\frac{1}{2}$ | 13 50 | 35 58 |
| 2 22 $\frac{1}{2}$ | 32 32 | 13 20 | 35 55 |

Rurfus per Sext. nouum

| | | | |
|------|---------------------|-------|-------|
| 2 28 | 32 30 | 12 55 | 35 43 |
| 2 35 | 32 30 $\frac{1}{2}$ | | |

Nota. In pofremis obferuationibus ab hora 2 M. 18 hucusque Soli non erat bene clarus, fed tenuibus nubeculis obuelabatur. Poftea cum Sol non admodum bene amplius pinnacidium illuminaret accipiebatur ♀ declinatio per Armillas in hunc qui fequitur modum.

| | | |
|-------------------|-------------------|----------|
| 2 40 Declinatio ♀ | | |
| vno pinn. | 2 6 | Altit. ♀ |
| altero pinn. | 2 5 $\frac{1}{4}$ | 35 26 |

Poftea non poterat ♀ amplius obferuari a Sole eo quod Soli ad occafum tendenti nubes rariufculæ occurrerent, fed poft occafum ☉ obferuabatur ♀ hoc modo.

| | | |
|-------------------|-------------------|-----------------------|
| 4 56 Declinatio ♀ | | |
| vno pinn. | 2 9 $\frac{1}{6}$ | Alt. 24 $\frac{1}{2}$ |
| altero | 2 9 | |

| | ☿ or. | ♀ occ. | Altit. ☿ | Altit. ♀ |
|-------------------|---------------------|---------------------|------------------|----------|
| 5 3 | 57 34 $\frac{1}{2}$ | 47 54 $\frac{1}{2}$ | 37 $\frac{1}{4}$ | 24 5 |
| 5 5 $\frac{1}{2}$ | 56 52 $\frac{1}{4}$ | 48 36 $\frac{3}{4}$ | 37 35 | 23 45 |
| 5 7 $\frac{1}{2}$ | 56 19 $\frac{1}{2}$ | 49 9 $\frac{5}{6}$ | 38 0 | 23 30 |
| 5 10 | 55 42 $\frac{1}{2}$ | 49 46 $\frac{3}{4}$ | 38 30 | 23 10 |

Dist. æquat. 105 29 *Pone itaque dist. æquat.*
 105 29 ♄ & ♀ circa horam a
 105 29¹/₃ Meridie 5¹/₂ tam P. 105 M.
 105 29¹/₃ 29¹/₆ et insensibiliter
 105 29¹/₃ aberrabis.

5 19 Declin. ♀ 2 10 Alt. ♀ 22¹/₆
 altero 2 9³/₄

Postea obseruabatur ♀ a luc. ♀ Decl. ♀ B. Alt. ♀
 5 40 39 11³/₄ 2 10¹/₂ 19¹/₂
 5 42¹/₂ 39 12 2 10¹/₂ 19¹/₆
 5 44 39 12 2 10¹/₂ 19 0

N.B. Ex omnibus his antecedentibus obseruationibus hoc die factis primum diurno tempore a Sole in ♀ & postea a Venere in stellas & planetas, inuicem conferendo omnia, & habito respectu mutatae parallaxeos ☉ et ♀ cum refractione, tum etiam motus Veneris intermedij & Solis posunt affixarum loca examinari et insuper loca horum planetarum ☉, ♀, ♄ & ♃ recte constitui. Quare his obseruationibus bene attendendum, nam erant diligentes et fuit satis bene serenum.

N.B. Sextans examinabatur et apparuit quod recte se habuerit. Horologium etiam bene his diebus mouebatur. Verum tamen ut ejus rejectior haberi possit ratio obseruabatur transitus Aldeboram per Meridiem, H. 6 M. 39⁵/₆

habens alt. 49 42 per Volub.
 49 41⁵/₆ per Tychon.

DIE 5 FEBRUARIJ P. M.

Inter ♀ & ♄ per Sext. vet.

| | Dist. | Decl. ♀ | Alt. ♀ |
|----------------------------------|-----------------------------------|----------------------------------|--------|
| 7 12 | 36 22 ³ / ₄ | 3 19 B. | 11 10 |
| 7 16 ¹ / ₂ | 36 22 ³ / ₈ | | 10 40 |
| 7 18 | 36 22 ¹ / ₂ | 3 19 ¹ / ₂ | 10 30 |

Inuestigatio motus ♀ ad diem 5 Februarij quando fuit stationaria ex obser. a ♄¹.

| H. 7 M. 12 | Dist. ♀ a ♄ | 36° 22 ³ / ₄ ' |
|------------|--------------------|--------------------------------------|
| | Declin. ♀ | 3 19 |
| | Declin. ♄ | 8 34 ¹ / ₂ |
| | Ang. diff. ascenf. | 36 12 45'' |
| | Afc. R. ♄ | 26 41 6 |

¹ E codice V.

Ergo Af. R. ♀ 350 28 20
 Declinatio 3 19 B.
 Alt. ♀ 11¹/₆ Resp. Longitudo 22 33 50)
 Latitudo 6 50 4 B.

DIE 17 FEBRUARIJ P. M.

| | Decl. ♀ | Bor. 3 | 14 ¹ / ₂ | Alt. ♀ |
|----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|--------------------------------|
| 5 27 | 78 5 | 31 48 | 109 53 | 10 ³ / ₈ |
| 5 32 | Repetita | 3 15 ¹ / ₂ | 10 fere | |
| | ♀ occid. | ♄ orient. | Dist. æqu. | Alt. ♀ |
| 5 33 20'' | 78 5 | 31 48 | 109 53 | |
| 5 36 40 | 78 28 | 31 25 | 109 53 | 9 20 |
| 5 38 33 | 78 55 ³ / ₄ | 30 56 ¹ / ₂ | 109 52 ¹ / ₄ | 9 0 |
| 5 41 13 | 79 34 ¹ / ₂ | 30 19 | 109 53 ¹ / ₂ | 8 45 |
| 5 42 58 | 80 0 | 29 53 ¹ / ₂ | 109 53 ¹ / ₂ | 8 15 |
| 5 45 7 | 80 32 ¹ / ₂ | 29 20 ¹ / ₂ | 109 53 | 8 0 |
| 5 47 | Decl. ♀ | | 3 16 ³ / ₄ | 7 40 |
| 5 54 ¹ / ₂ | Eadem repetita | | 3 18 | 6 30 |
| 6 11 | ♀ a luc. ♀ | 43 3 | | 4 ¹ / ₂ |
| 6 14 | | 43 2 | | 4 0 |
| 6 15 | | | 3 21 B. | 3 ⁵ / ₈ |
| 6 20 | | 42 59 | | 3 ¹ / ₈ |
| 6 23 | | 42 57 | | 3 0 |
| 6 26 | | | 3 28 | 2 ¹ / ₂ |

dubia

N.B. Ex his potest locus ♀ jam ad Solem tendentis verificari & explorari, an motus intermedius ab vltima obseruatione melius consentiat cum Alphonsino quam Coperniano calculo. Est enim procul dubio euidens discrimen. Oportet autem habere rationem imprimis refractionis ♀, & differentia incidens magna ex parte ob refractionem erat adhibenda, etiam parallaxis.

DIE 18 FEBRUARIJ P. M.

Erat apprime serenum.

| | Dist. æquat. | Decl. ♀ B. | Alt. ♀ |
|----------------------------------|--------------|------------------------------------|-------------------------------|
| 5 42 | | 3 9 ¹ / ₂ | 9 55 |
| 5 50 ¹ / ₂ | ♀ a ♄ | 110 25 ¹ / ₃ | 7 |
| 5 54 ¹ / ₂ | | 110 25 ¹ / ₄ | 6 ³ / ₄ |
| 5 56 | | 110 25 ¹ / ₄ | 6 ¹ / ₈ |
| 5 57 ¹ / ₂ | | 3 10 ³ / ₄ | 6 ¹ / ₂ |
| 6 4 | Inter ♀ & ♄ | 42 37 | |
| 6 8 | per Sext. | 42 36 | |
| 6 15 | | 3 15 | 3 ¹ / ₄ |
| 6 17 | | 3 15 ¹ / ₂ | 2 ³ / ₄ |

Hinc ex restituto loco ♄ et ♃ potest verificari locus ♀. Sed oportet habere rationem refractionis et paralaxeos.

Examinatio obseruationum pro loco ♀

DIE 9 JANUARIJ P. M.

| | | |
|--------------|----------------------|---------------------|
| 2'' 49' 55'' | Alt. ♀ in Meridie | 28 52 0 |
| | | 34 5 20 |
| | | 5 13 20 |
| 3 53 | Declin. per Armillas | 5 12 40 |
| | Pone H. 3 | |
| | declinat. ♀ Mer. | 5 13 |
| | Declinatio ♀ | 5 9 $\frac{1}{8}$ |
| | Differentia | 3 $\frac{2}{3}$ |
| 5 40 | Inter ♀ & lucidam ♀ | 49 14 $\frac{1}{4}$ |
| | Decl. ♀ auftr. | 5 9 $\frac{1}{4}$ |
| | Diff. ascenf. | 42 16 6 |
| | Ascenf. R. lucidæ ♀ | 26 1 25 |
| | Ascenf. R. ♀ | 343 45 19 |
| 6 6 | Distant. æquat. ♀ | |
| | & oculi ♀ | 79 16 $\frac{1}{2}$ |
| | Ascenf. R. oculi ♀ | 63 4 40 |
| | Per Armillas | |
| | Ascenf. R. ♀ | 343 48 10 |
| | Per Sext. Ascenf. | |
| | H. 5. 50 | 343 45 19 |
| | Ponatur Ascenf. R. ♀ | 343 46 45 |
| | Declinatio ♀ auftr. | 5 9 15 |
| | Resp. Longitudo | 13 4 48) |
| | Latitudo | 1 38 18B. |

DIE 14 EIUSDEM MENSIS.

| | | |
|------|----------------------|--------------------|
| 2 41 | P. M. Alt. Merid. ♀ | 30 55 0 |
| | | 34 5 20 |
| | Declinatio ♀ auftr. | 3 10 20 |
| 3 5 | Per Armillas | 3 10 20 |
| 4 42 | | 3 7 20 |
| 5 9 | | 3 6 45 |
| 4 50 | Distantia ♀ a ♄ | 40 19 |
| | Declin. ♀ auftr. | 3 7 $\frac{1}{4}$ |
| | Declin. ♄ Bor. | 7 56 $\frac{1}{2}$ |
| | Diff. ascenf. | 38 51 59 |
| 5 0 | Distantia ♀ a luc. ♀ | 45 51 |
| | Diff. ascenf. | 39 33 10 |
| | Ascenf. R. ♀ | 346 28 15 |
| | Pone Ascenf. R. ♀ | |
| | H. 4 $\frac{5}{6}$ | 346 27 30 |
| | Declinatio M. | 3 6 45 |
| | Resp. Longitudo | 16 20 19) |
| | Latitudo | 3 29 24B. |

DIE 15 JANUARIJ.

| | | |
|------|-------------------|------------------------|
| 4 38 | Dist. inter ♀ & ♄ | 39 48 $\frac{1}{4}$ |
| | Decl. ♀ | 2 44 $\frac{1}{2}$ M., |
| | Decl. ♄ B. | 7 57 $\frac{1}{2}$ |
| | Diff. ascenf. | 38 26 14 |
| | Asc. R. ♀ | 346 55 0 |
| 4 55 | Dist. æquat. | 38 24 $\frac{1}{2}$ |
| | Asc. R. ♀ | 346 56 $\frac{1}{2}$ |
| | Pone H. 4 M. 38 | |
| | Asc. R. ♀ | 346 56 |
| | Decl. ♀ Auftr. | 2 44 $\frac{1}{2}$ |
| | Resp. Longitudo | 16 55 20) |
| | Latitudo | 2 38 48B. |

DIE 21 FEBRUARIJ.

| | | | |
|--------------------|--|---------------------|-------------------------|
| 5 59 23 | Decl. B. | 2 48 | Alt. 2 $\frac{1}{2}$ G. |
| 6 4 $\frac{1}{6}$ | Dist. æquat. ♀ | | |
| | a Cane min. | 125 42 | |
| | Declin. semel tantum, quia adeo decluius fuit, obseruari potuit. | | |
| 6 12 | ♀ a ♄ per | 44 28 $\frac{1}{2}$ | Alt. 1 0 |
| 6 16 $\frac{1}{6}$ | Sext. | 44 27 | 0 30 |
| 6 18 | | 44 26 | 0 20 |

Oportet in obseruationibus refractionis habere rationem euidentem.

DIE 24 FEBRUARIJ, MANE.

Nota. Videbatur mane ante ortum ☉ magna quædam stella instar ♀, Sole iam iam exorituro, quæ forte ipsa ♀ erat quæ tamen occidentalis a Sole fuit. Sed propter latitudinem nimiam boream ante Solem videbatur.

DIE 26 FEBRUARIJ.

Hoc die ante ortum ☉ conspiciebatur ♀ cum propre horizontem esset, obseruari tamen paulo post propter rariusculas nubes non potuit. N.B. Aliquot etiam antecedentibus diebus, quamuis ♀ non procul a ☉ cum ☉ abfuit, vespere & mane videbatur.

DIE 3 MARTIJ.

N. B. Sequentes obseruationes in ♀ sunt admodum bonæ, nam erat apprimè Ierenum.

5 1 $\frac{1}{2}$ Incepit ♀ stella oriri.

| ♀ a luc. Vuit. | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------|---------------------|--------------------|-------------------------|
| 5 13 $\frac{1}{2}$ | B. 0 10 | 1 35 | |
| 5 17 $\frac{1}{2}$ | 46 15 $\frac{1}{2}$ | 2 3 | 86 0 |
| 5 19 $\frac{1}{2}$ | | 2 22 $\frac{1}{2}$ | 85 45 |
| 5 21 | 46 16 $\frac{1}{2}$ | 2 34 $\frac{1}{2}$ | 85 22 |
| 5 23 $\frac{1}{2}$ | | 2 48 | 84 46 |
| 5 24 $\frac{1}{2}$ | 46 17 | | 84 5 |
| 5 26 | 0 1 $\frac{2}{3}$ | | |
| 5 28 | 0 1 $\frac{3}{4}$ | 3 32 $\frac{1}{2}$ | bonæ |
| 5 31 $\frac{1}{4}$ | 46 19 | 0 1 | 3 56 83 30 |
| 5 33 $\frac{3}{4}$ | 46 20 $\frac{1}{4}$ | 0 0 $\frac{3}{4}$ | 4 17 83 25 |
| 5 37 $\frac{1}{6}$ | 46 21 $\frac{1}{6}$ | 0 0 $\frac{1}{4}$ | 4 44 $\frac{1}{2}$ 83 4 |
| 5 40 $\frac{1}{4}$ | 46 22 M. 0 | 0 $\frac{1}{2}$ | 5 9 82 50 |
| 5 43 $\frac{5}{6}$ | 46 22 $\frac{1}{4}$ | 0 1 | 5 35 82 32 |
| 5 47 $\frac{1}{6}$ | 48 22 $\frac{3}{4}$ | 0 1 $\frac{1}{2}$ | 6 2 82 18 |

Postea non poterat amplius videri
♀ a Vulture, sed obseruabatur per
Armillas ab Arcturo hoc modo.

| Arctur. occ. | ♀ orient. | Azim. ♀ | Alt. ♀ |
|---|---------------------|---------------------|--------------------------|
| 5 52 $\frac{3}{4}$ | 51 53 $\frac{1}{2}$ | 77 15 | 80 9 6 50 $\frac{1}{2}$ |
| 5 54 38" | 52 18 | 76 50 $\frac{3}{4}$ | 79 10 7 2 |
| Hæ sunt meliores superioribus | | | |
| 5 56 50 | 52 50 | 76 15 $\frac{1}{4}$ | 78 40 7 23 $\frac{1}{2}$ |
| Dist. 129 8 $\frac{1}{2}$ N. B. Azimuta nu- | | | |
| æquat. 129 8 $\frac{3}{4}$ merantur a Meridie | | | |
| 129 5 $\frac{1}{4}$ verus ortum. | | | |

| Decl. ♀ Mer. | Azim. | Alt. |
|-------------------|-------------------|-------------------------|
| 6 1 0" | 0 6 dubia | 77 44 bona 7 58 |
| 6 4 | 0 4 | 77 8 8 21 $\frac{1}{2}$ |
| 6 7 $\frac{1}{4}$ | 0 3 $\frac{1}{2}$ | bonæ 8 50 |
| 6 10 | 0 5 | |

Nota. Hanc varietatem in postre-
mis duabus peperit aurora, nam
Venus vix videbatur propter Solem
iam iam oriturum.

N. B. Vt refractio ♀ certius consta-
ret, obseruauimus eadem nocte me-
diam Balthej Orionis ad occasum
tendentem hoc modo. Est autem di-
stantia Canis min. et Med. Balthej
Orionis vera 31 30 $\frac{1}{4}$

| | | |
|------------------|--|-----------------------|
| Declinatio | | 1 31 $\frac{1}{2}$ M. |
| 11 3 | Inter Can. min. et mediam Cin- guli Orionis | 31 24 |
| 11 9 | Eadem repetita | 31 22 $\frac{1}{2}$ |
| Declin. | | |
| cinguli Orion. 1 | | 24, Alt. 4 30 |
| Eadem repet. 1 | | 21 $\frac{1}{2}$ 3 30 |

Hinc poterit indagari refractio cin-
guli Orionis & postea applicari Ve-
neri; vltus lum autem potissimum cin-
gulo Orionis eo quod hæc stella sit
juxta æquatorem quemadmodum &
♀ hoc tempore.

Potes etiam conferre obseruatio-
nes quas habui in ♀ Anno 1582 præ-
sertim die 23 Februarij, eam quæ
capiebatur H. 6 M. 57 ab oculo ♀ 33 g.
47 $\frac{1}{2}$ M. vsque in eas quæ fiebant iux-
ta occasum. Item eam quæ die se-
quente ad oculum ♀. Item die 25 Fe-
bruarij vsque in occasum.

Potes etiam refractionem Veneris
matutinam inquirere ex Anno 1585.
Nam die 15 Nouembris in altitudine
p. 8 habuit declin. 6 36 & postea in
altitudine 23 part. habuit eandem
6 44. Si itaque in declinatione recte
se habet mutatio per refractionem
vtique etiam in distantijs. Potes au-
tem facere collationem cum velper-
tinis.

Potes etiam adhibere in consilium
obseruationes die 23 Nov. factas ab
Alt. ♀ 10 part. usque in 20 part. Ac-
cepimus etiam hoc anno ♀ rem ad
occasum tendentem pro refractione
eius indaganda.

Inquisitio¹ φαινόμενων ♀ ex obserua-
tionibus diei 17 & 18 Februarij & 3 Martij
pro anomalia orbis corrigenda.

DIE 17 FEBRUARIJ.

| | | |
|--------------------------|--------------------|---------------------|
| H. 6 M. 10 | Dist. ♀ a lucida | ✓ 43 3' |
| ♀ Alt. 4 $\frac{1}{2}$ ° | Declin. ♀ | 3 20 |
| | Declin. luc. ✓ | 21 29 |
| | Ang. diff. ascenf. | 40 14 $\frac{1}{2}$ |
| | Asc. R. luc. ✓ | 26 1 $\frac{1}{2}$ |
| | Ergo Asc. R. ♀ | 345 47 |
| | Resp. Longitudo | 18 15) |
| | Latitudo | 8 41 B. |

DIE 18 FEBRUARIJ.

| | | |
|--------------------|--------------------|---------------------|
| H. 6 $\frac{1}{2}$ | Dist. ♀ a ♄ | 42° 37' |
| Alt. ♀ 5° | Declin. ♀ | 3 11 B. |
| | Declin. ♄ | 9 4 B. |
| | Ang. diff. ascenf. | 42 28 $\frac{1}{2}$ |

¹ E codice V.

| | |
|----------------------------|------------------------------|
| Afc. R. $\frac{1}{2}$ | 27 44 45'' |
| Ergo Afc. R. $\frac{1}{2}$ | 345 15 55 |
| Resp. Longitudo | 17 41 $\frac{1}{2}$ \times |
| Latitudo | 8 45 $\frac{1}{2}$ B. |

DIE 3 MARTIJ, MANE.

| | |
|--|-----------------------------|
| H. 5 $\frac{1}{2}$ Dist. $\frac{1}{2}$ a luc. Vulturis | 46° 20 $\frac{1}{4}$ ' |
| Declin. $\frac{1}{2}$ | 0 0 $\frac{3}{8}$ B. |
| Declin. Vulturis | 7 51 $\frac{3}{8}$ B. |
| Ang. diff. Afc. R. | 45 49 |
| Afc. R. $\frac{1}{2}$ | 338 27 $\frac{1}{8}$ |
| Alt. $\frac{1}{2}$ 4 $\frac{1}{2}$ Resp. Longitudo | 10 6 $\frac{3}{8}$ \times |
| Latitudo | 8 26 $\frac{1}{4}$ B. |

DIE 8 MARTIJ.

| Mane | $\frac{1}{2}$ orient. | Arctur. occ. | Dist. æquat. | Alt. $\frac{1}{2}$ |
|--------------------|-----------------------|-------------------------|----------------------|--------------------|
| 5 30 $\frac{1}{4}$ | 76 45 | 50 46 $\frac{1}{2}$ | 127 31 $\frac{1}{2}$ | 6 |
| 5 32 $\frac{1}{2}$ | 76 14 | 51 17 $\frac{3}{4}$ | 127 31 $\frac{3}{4}$ | 6 $\frac{1}{2}$ |
| 5 44 | Decl. $\frac{1}{2}$ | 1 30 $\frac{1}{2}$ Mer. | | |

Postea non licuit plus obseruare in $\frac{1}{2}$, quia nubes eam offuscabant, sed sunt mediocriter bonæ hæ obseruationes, quibus sine sensibili errore vti potes in $\frac{1}{2}$ loco inquirendo.

DIE 11 MARTIJ.

Sequuntur obseruationes $\frac{1}{2}$ antelucanæ.

| $\frac{1}{2}$ a luc. Vult. per Sext. | Declin. $\frac{1}{2}$ | Alt. $\frac{1}{2}$ |
|--------------------------------------|-----------------------|-------------------------|
| 5 19 A. M. | 2 20 M. | 6 5 |
| 5 22 $\frac{1}{2}$ | 44 40 | 2 20 $\frac{1}{8}$ 6 40 |
| 5 26 | 44 39 | 7 5 |
| 5 28 | 44 40 | 2 21 7 20 |

Postea obseruabatur $\frac{1}{2}$ ab Arcturo in dist. æquat. semel.

| Arctur. occ. | $\frac{1}{2}$ orient. | Dist. æquat. | Alt. $\frac{1}{2}$ |
|--------------|----------------------------|--------------|--------------------------|
| 5 32 | 55 16 $\frac{1}{2}$ | 71 42 | 126 58 $\frac{1}{2}$ 8 0 |
| 5 36 | Repet. Decl. $\frac{1}{2}$ | 2 22 | 8 30 |

Hæ obseruationes in $\frac{1}{2}$ erant satis bonæ pro loco eius verificando iuxta digressionem a Sole matutinam, sed refractionis est habenda ratio, vt locus eius exacte constet.

DIE 2 APRILIS.

Mane. Inter $\frac{1}{2}$ et Vulturem.

| Dist. per Sext. vet. | Decl. $\frac{1}{2}$ M. per Armill. | Alt. $\frac{1}{2}$ per Q. volub. |
|----------------------|------------------------------------|-------------------------------------|
| 4 27 $\frac{1}{8}$ | 50 34 | 4 45 $\frac{3}{4}$ 4 57 |
| 4 31 $\frac{1}{2}$ | 50 34 $\frac{3}{4}$ | 4 46 $\frac{1}{2}$ 5 32 |
| 4 35 | 50 35 | 4 47 5 59 |
| 4 38 | 50 35 $\frac{3}{8}$ | 4 47 $\frac{1}{2}$ 6 28 |
| 4 41 $\frac{1}{2}$ | 50 36 $\frac{1}{4}$ | 4 48 6 52 |
| 5 14 | | 4 59 $\frac{1}{2}$ 11 $\frac{1}{2}$ |

DIE 5 APRILIS, MANE.

| Inter $\frac{1}{2}$ & Vultur. | Decl. $\frac{1}{2}$ | Alt. $\frac{1}{2}$ |
|-------------------------------|-------------------------------|-------------------------|
| 4 8 $\frac{1}{8}$ | 4 32 $\frac{3}{8}$ Aufst. ... | |
| 4 10 | ... | 3 38 $\frac{1}{2}$ |
| 4 15 $\frac{1}{2}$ | 52 15 | 4 34 $\frac{1}{2}$ 4 26 |
| 4 17 $\frac{5}{8}$ | 52 16 $\frac{3}{8}$ | 4 35 $\frac{1}{2}$ 4 44 |
| Per Sext. vet. | Per Arm. subt. | Per Volub. |
| 4 20 $\frac{1}{8}$ | 52 17 $\frac{1}{2}$ | 4 35 $\frac{3}{4}$ 5 9 |
| 4 23 $\frac{1}{8}$ | 52 19 | 4 36 $\frac{1}{4}$ 5 28 |
| 4 26 $\frac{1}{2}$ | 52 19 $\frac{1}{4}$ | 4 36 $\frac{1}{4}$ 5 53 |
| 4 56 | | 4 38 9 41 |

| Inter $\frac{1}{2}$ & \odot | Alt. \odot |
|-------------------------------|-------------------------------|
| 4 59 41 23 | 4 38 10 5 0 31 $\frac{1}{2}$ |
| 5 2 $\frac{1}{2}$ 41 24 | 4 38 $\frac{1}{2}$ 1 15 |
| 5 5 41 24 $\frac{3}{4}$ | 4 38 $\frac{3}{4}$ 1 40 |
| 5 8 $\frac{1}{4}$ 41 25 | 2 0 |
| 5 13 $\frac{5}{8}$ 41 27 | 4 38 $\frac{5}{8}$ 11 55 2 45 |
| 5 17 $\frac{3}{8}$ 41 28 | 4 39 $\frac{1}{4}$ 12 32 3 10 |
| 5 20 41 28 $\frac{3}{8}$ | 4 39 $\frac{1}{2}$ 12 51 3 30 |
| 5 24 Declin. \odot | 9 42 4 5 |
| 5 26 $\frac{5}{8}$ | 9 41 4 19 |

Fuit tunc \odot a Mer. ad ortum 96 17

Horologium in Meridie proxime sequenti 5 $\frac{1}{2}$ M. tardius iusto ibat, is error aliquot diebus competit.

DIE 6 APRILIS, MANE.

| Mane | Inter $\frac{1}{2}$ & Aquilam | Declin. $\frac{1}{2}$ | Alt. $\frac{1}{2}$ |
|--------------------|-------------------------------|-----------------------|--------------------|
| 4 8 | per Sext. | 4 29 M. | 3 $\frac{1}{4}$ |
| 4 11 $\frac{5}{8}$ | 52 49 | 4 29 $\frac{3}{4}$ | 4 30 |
| 4 14 $\frac{1}{4}$ | 52 50 $\frac{1}{8}$ | 4 30 | 4 50 |
| 4 17 $\frac{1}{2}$ | 52 51 $\frac{1}{8}$ | 4 30 $\frac{3}{4}$ | 5 15 |
| 4 20 $\frac{3}{4}$ | 52 52 | 4 31 $\frac{1}{4}$ | 5 40 |
| 4 23 $\frac{3}{8}$ | 52 52 $\frac{1}{2}$ | 4 32 | 6 0 |

N. B. Horologium in Meridie sequenti 14½ M. iusto tardius mouebatur a Meridie proxime antecedente.

DIE 10 APRILIS, MANE.

♀ a Vulture per Sext.

| | | Decl. ♀ M. | Alt. ♀ |
|------|-------|------------|--------|
| 4 6 | 55 18 | 4 3½ | 3 50 |
| 4 10 | 55 19 | 4 4 | 4 20 |

DIE 17 AUGUSTI A. M.

Obseruabantur ♃ & ♀ qui admodum erant propinqui in hunc qui sequitur modum.

3^H 28' Declin. ♀ 19 30

Distantia illorum per Radium obseruabatur tunc temporis scrupulorum faltem 10.

Erant admodum propinque, sed ♀ erat paulo occidentalior, latitudo fere eadem.

3 31 Declin. ♀
repet. 19 30½

3 33 Repetita dist.
per Radium 0 8
eadem mox repetita
per Radium 0 7

3 33 Fuit vtriusque
altitudo 11 52½

3 36½ Altit. ♀ 12 5 Azim. 73 7 a Sept.
♃ erat paululum ♀ septentrionalior vix ad quantitatem diametri ♀.

Postea obseruabatur vtriusque distantia a boreali Cap. II per Sext.¹

3 41 Dist. ♀ 22 19½
3 42 22 20 Alt. ♀ 15 G.

3 50 Declin. ♀ 19 29½ proxime
Repetita 19 29¾ bona
Distantia 0 6 } bonæ
vtriusque 0 6 }
per Radium 0 6 }

N. B. His obseruationibus ♀ et ♃ potes tuto credere. Postea obseruabatur ♀ a ☉ hoc modo.

¹ Cf. supra p. 177 inter obseruationes Iovis.

| | Inter ♀ & ☉ | Declin. ♀ | Altit. ☉ |
|-------|----------------------|-----------|-----------|
| 5 4 | 28 8 | | |
| 5 6½ | 28 8½ | | 2 G. fere |
| 5 8 | 28 8½ | | 2 10 |
| 5 10½ | | 19 26½ | |
| 5 12 | Repetita | 19 26½ | |
| 5 13½ | 28 9½ | | 2 50 |
| 5 16 | 28 11 | | 3 10 |
| 5 18 | 28 12 | | 3 20 |
| 5 19½ | 28 12½ | | 3 40 |
| | | Decl. ☉ | |
| 5 21¾ | | 10 32½ | 3 50 |
| | Azim. 103 g. a Sept. | | |
| 5 23½ | Repet. Decl. 10 33 | | 4 10 |
| 5 26 | 28 13½ | | 4 30 |
| 5 28 | 28 14 | | 4 45 |
| 5 30 | 28 14½ vel 1/3 | | 5 0 |
| 5 31¾ | | 10 30¾ | 5 15 |
| 5 34 | Repetita | 10 30¾ | 5 30 |
| 5 36 | 28 15½ | | 5 45 |
| 5 38 | 28 16½ | | 6 0 |
| 5 40½ | 28 18 | | 6 20 |
| 5 42½ | 28 16½ | | 6 45 |
| 5 44 | 28 17¼ | | 6 55 |
| 5 46 | 28 18 | | 7 10 |
| 5 47¾ | 28 18½ | | 7 22 |
| 5 50 | 28 19½ | | 7 35 |
| 5 51 | 28 20 | | 7 50 |
| 5 53½ | 28 20½ | | 8 10 |
| 5 55 | | 10 28 | 8 20 |
| 6 0 | Decl. ♀ 19 25 B. | | |
| 6 34½ | Repetita 19 25 | | |

Horologium in Meridie seq. iusto celerius mouebatur M. 4½, qui error in præcedentibus temporibus a Meridie præcedente est corrigendus.

Non erat exquisitè serenum.

DIE 18 AUGUSTI.

Obseruatio ♃ & ♀.

| | Distantia | Declin. ♀ | Altit. ♀ |
|-------|-------------------|-----------|----------|
| 3 35 | | 19 14¾ | 10 55 |
| 3 39½ | | 19 14¾ | 11 31 |
| 3 51½ | Inter ♀ & 19 22½ | | 13½ |
| 3 55 | infer. 19 23 | | |
| 3 57 | Cap. II 19 22½ | | 13½ |
| 3 59 | 19 23 | | 14 |
| 4 2 | ♀ a lucid. 33 16½ | | 14½ |
| 4 4 | ped. II 33 17 | | |

| | <i>Distantia</i> | <i>Declin. ♀</i> | <i>Altit. ♀</i> |
|-------------------|--------------------------------------|------------------|------------------|
| 4 6 | 33 17 | | 15 |
| 4 8 | 33 17 $\frac{1}{2}$ | | 15 $\frac{1}{4}$ |
| 4 9 $\frac{1}{2}$ | | 19 13 | 15 $\frac{3}{4}$ |
| | <i>alt. pin.</i> 19 12 $\frac{1}{2}$ | | |
| 4 19 ♀ a luc. | 45 26 | | 16 45 |
| 4 21 hum. | 45 25 $\frac{3}{4}$ | | 17 0 |
| 4 24 Orion. | 45 26 $\frac{1}{2}$ | | 17 25 |
| 4 27 | 45 25 $\frac{1}{4}$ | | 17 55 |

Pone itaque circa hoc tempus distantiam Veneris a sinistro & lucido humero Orionis 45 26.

| | | |
|------|---------------------|------------------|
| 4 33 | 19 11 $\frac{1}{2}$ | 18 $\frac{1}{2}$ |
| | I 0 47 | |

H. 4 $\frac{1}{2}$ Dist. ♀ & ♀ per Radium II 0 48
5 6 36" transiit ♀ per 90 grad. in
Altit. 23 17 $\frac{1}{6}$. Hinc poterit
eius locus & declinatio
verificari.

| | |
|--------------------|---------------------|
| 5 9 Declin. ♀ | |
| per Armillas | 19 10 $\frac{1}{2}$ |
| 5 10 $\frac{1}{2}$ | 19 11 |
| 5 14 | 19 11 |

Hoc die Venus a Sole vt heri obseruari nequaquam poterat ob rariussculas nubeculas, quæ eius aspectum toto illo tempore quo videri post ortum ☉ heri poterat, intercludebant. Verum hesternæ obseruationes ♀ a ☉ sunt satis exactæ, quibus fidere potes in restituendis locis affixarum

a Sole per Venerem, collatione facta cum ijs, quas Anno 82 nacti sumus. Locus autem Veneris ex hodierna ad fixas obseruatione admodum diligenter potest conferri cum hesternæ facta ad Bor. Cap. II adhibito in consilium motu diurno.

DIE 20 SEPTEMBRIS, MANE.

| | |
|------------------------------|--------------------------|
| 5 46 Decl. ♀ per Arm. Austr. | 6 40 B. |
| 5 57 Azim. a Mer. | 78 15 Alt. 15 42 |
| 6 0 $\frac{1}{4}$ ad ort. | 77 44 16 2 $\frac{1}{2}$ |
| 6 1 $\frac{3}{4}$ | 77 32 16 12 |

DIE 5 FEBRUARIJ¹.

| | |
|------------------------|-------------|
| H. 7 M. 12 ♀ Longitudo | 22 33 50) (|
| Latitudo | 6 50 4 B. |

DIE 17 FEBRUARIJ¹.

| | |
|------------------------|------------|
| H. 6 M. 10 ♀ Longitudo | 18 15 0) (|
| Latitudo | 8 41 B. |

DIE 18 FEBRUARIJ¹.

| | |
|---------------------------------|-------------------------|
| H. 6 $\frac{1}{12}$ ♀ Longitudo | 17 41 $\frac{1}{2}$) (|
| Latitudo | 8 45 $\frac{1}{2}$ B. |

DIE 3 MARTIJ¹.

| | |
|--------------------------------|------------------------|
| H. 5 $\frac{1}{2}$ ♀ Longitudo | 10 6 $\frac{3}{8}$) (|
| Latitudo | 9 26 $\frac{1}{4}$ B. |

OBSERUATIONES MERCURIJ.

DIE 6 JANUARIJ.

Nota. Ad ☿ eo vesperi admodum diligenter attendamus, eo quod esse debebat in maxima remotione a ☉ vespertina 18 quasi graduum in signo longarum descensionum. Et directo Sextante in planum per ☿ & ♀ positaque distantia ☿ a ♀ partium quasi 27 qualem calculus præbebat Prutenicus. Nusquam enim apparuit ☿ vsque in nubes quæ erant prope ipsum occidit in altitud. quasi 3 part. diligentis-

sime animaduertentibus. Sed ob nimium ventum et crepusculum aëris claritas paulo densior solito erat. Mirabar itaque ☿ in tanta distantia non apparere cum prius longe ☉¹ propinquiorem viderimus. Sed in sequentibus D. V. vltius attendamus.

DIE 9 JANUARIJ.

P. M. Obseruabatur ☿ a ♀ per distantiam Sextantis idque iuxta limites maximæ remotionis a ☉.

¹ E codice V.

| | Dist. ♀ & ♀ | Decl. ♀ M. | Azim. ♀ | Alt. ♀ per ♀. minim. |
|-------|----------------|---------------|---------------|----------------------------|
| 4 48½ | 25 15¾ | 15 27½ | | 5 50 |
| 4 52¾ | 25 16 | | | 5 25 |
| 4 58½ | 25 15 | | | 4 40 |
| 5 3 | 25 15¼ | | | 4 5 |
| 5 6 | 25 13½ | | Per Volub. | 3 56 |
| 5 12 | 25 12¾ | | 56 5 | 3 15½ |
| 5 16 | 25 11½ | | 56 55 | 2 46 |
| 5 18½ | | 15 22¼ | per Armillas. | |
| 5 21 | 25 9½ | | 57 54 | 2 15 |
| 5 23 | | 15 21 | | |
| 5 26½ | 25 9 | 15 17 | 59 5 | 1 40 |
| | | fere | | |

N. B. Hæ obseruationes ♀ sunt satis exactæ, eratque apprime serenum flante Borea, & apparuit magnitudo ♀ cum eßet iuxta occasum similis magnitudini Lucidæ √, non tamen tam magnus erat, atque cum obseruaretur in Nouemb. præcedentis anni orientalis, varietas autem in distant. a ♀ & declinatione fit maxime per refractionem.

DIE 14 JANUARIJ P. M.

| | Inter ♀ & ♀ per Sext. | Declin. ♀ M. | Alt. ♀ |
|-------|--------------------------|--------------|--------|
| 5 15 | 25 10¼ | 13 7½ | 3 45 |
| 5 18½ | 25 9¼ | | 3 20 |
| 5 21 | 25 8 | 13 6 | 3 5 |
| 5 25 | 25 7 | 13 6 | 2 45 |
| 5 28 | 25 6 | 13 5 | 2 30 |
| 5 32 | 25 4 | 13 2 | 2 25 |

Ex his itaque poterit locus ♀ satis certo indagari, modo habeatur ratio refractionis in tam decliui situ contingentis, idque vel ex præcedentibus vel sequentibus in ♀ & ♄.

DIE 15 JANUARIJ P. M.

Obseruabatur ♀ a ♀ per Sextantem

| | | Decl. ♀ | Alt. ♀ |
|------|--------|---------|--------|
| 5 21 | 25 30½ | 12 41½ | 2 30 |
| 5 27 | 25 29 | | 2 15 |
| 5 29 | | 12 29 | 2 0 |

Postea non amplius hoc vespere apparuit ♀ densioribus le nubibus

abdens iuxta occasum, sed fuerunt tamen hæ obseruationes satis bonæ et certæ.

Examinatio obseruationis ♀.

Pro refractione ipsius cognoscenda obseruabatur distantia inter canem et sinist. pedem Orionis in Alt. 3½ part. 38 gr. 25¾ M. Refractio 11¾ M., vera distantia est 38 37½ Alt. 2½ grad., distant. 38 25. Refractio 12½.

| | in Alt. | in Dist. | in Declin. |
|-------------------------|---------|----------|------------|
| Sic ex dist. | 4° 35' | 5' 45" | 8' 15" |
| Canis min. | 4 0 | 7 0 | 9 50 |
| & Cordis ∩ ¹ | 3 25 | 7 30 | 11 15 |
| | 3 0 | 8 30 | 12 0 |
| | 2 0 | 9 0 | 13 30 |

Die 9 Januarij obseruabatur ♀ etiam ob refractionem ♀. Motus diurnus Long. est eo die Min. 45 ex Ephemerid. Mæstl. declinationis vero 25 Min. ex obseruatione.

5 49 Dist. inter ♀ & lucid. √ 49 14½ vera Declin. ♀ Auf. 5 10 vera

7 39 Ergo eßet dist. vera Decl. 5 8 vera 49 11

8 5 eßet Decl. dist. vera 5 7½ vera 49 10

| Alt. ♀ | Refr. declin. | Refract. dist. |
|--------|---------------|----------------|
| 5 30 | 7' 0" | ... |
| 5 10 | ... | ... |
| 4 45 | ... | 7' 40" |
| 4 20 | 7 30 | 8 30 |
| 4 0 | 8 10 | 9 30 |
| 3 0 | 10 5 | 10 40 |
| 2 30 | ... | 13 15 |
| 2 20 | ... | 14 30 |
| 2 0 | 14 10 | 16 15 |

Quia declinatio ♀ est austrina refractione obseruatæ declinationi addenda est, sicuti etiam distantia vt vtraque vera habeatur.

| Ex ♄ | Alt. ♄ | Refr. declin. | Refract. dist. |
|------|--------|---------------|----------------|
| | 2 35 | 13 30 | 10 0 |
| | 2 10 | 14 30 | 11 30 |

¹ Vide infra inter obseruationes stellarum australium d. 29 Januarij.

DIE 9 JANUARIJ.

| | Altit. ♀ | Dist. ♀ & ♀ per Sext. | Decl. ♀ M. |
|-----------------------------|---------------------|--------------------------|------------------------|
| 4 48 | 5 50 | 25 16 | 15 27½ |
| | Refr. | 5 adde | 7 adde |
| | | 25 21 | 15 34½ |
| 5 15 | 2 40 | 25 11½ | 15 22¼ |
| | Refr. | 10 adde | 12 |
| | | 25 21½ | 15 34½ |
| Pone H. 4.50 M. dist. veram | | | |
| | inter ♀ & ♀ | | 25 21¼ |
| | Declinatio ♀ austr. | | 15 34½ |
| | Declinatio ♀ austr. | | 5 10 |
| | Differ. ascenf. | | 23 32 40 |
| | Afc. R. ♀ | | 343 45 15 |
| | Ascensio Recta ♀ | | 320 12 35 |
| | Declinatio Merid. | | 15 34 30 |
| | Resp. Longitudo | | 17 45 7 ^{xxx} |
| | Latitudo | | 0 1 M. |

DIE 14 JANUARIJ P. M.

| | Altit. ♀ | Dist. ♀ et ♀ | Decl. ♀ Mer. |
|-----------------------|---------------------|--------------|------------------------|
| 5 15 | 3 45 | 25 10 | 13 7½ |
| | Adde Rfr. | 8 | 8½ |
| | Vera dist. | 25 18 | |
| | | vera decl. | 13 16 |
| 5 21 | 3 G. | 25 7 | 13 6 |
| | | adde 10 | 10½ |
| | | Dist. vera | 25 17 |
| | | Vera decl. | 13 16½ |
| 5 28 | 2 30 | 25 6 | 13 5 |
| | | adde 11½ | 12 |
| | | Vera dist. | 25 17½ |
| | | vera decl. | 13 17 |
| Ponatur H. 5½ Dist. ♀ | | | |
| | et ♀ vera | | 25 17½ |
| | Declinatio ♀ Merid. | | 13 16½ |
| | Declinatio ♀ M. | | 3 6¾ |
| | Differ. ascenf. | | 23 26 7 |
| | Afc. R. ♀ | | 346 26 45 |
| | Ascensio Recta ♀ | | 323 0 38 |
| | Declinatio M. | | 13 16 30 |
| | Resp. Longitudo | | 21 2 56 ^{xxx} |
| | Latitudo | | 1 19 18B. |
| 4 50 | | Ascenf. ♀ | 346 27 30 |
| | | subtrahe | 45 |
| | | | 346 26 45 |

A Cane minore¹

| | |
|--------------------|---------------------|
| Posita Declinat. ♀ | 13 18½ |
| Declinatio ♀ | 3 6¾ |
| Distantia | 25 17½ |
| Differ. ascenf. | 23 25 18 |
| Longitudo | 21 4 ^{xxx} |
| Latitudo | 1 19½ B. |

DIE 15 JANUARIJ P. M.

| | | |
|---------------------|-----------------|-------------------------|
| 5 21 | Dist. ♀ | Declin. |
| | & ♀ 25 30½ | ♀ 12 41½ |
| | Alt. ♀ 2½ G. | |
| | Refr. adde 12½ | 12½ |
| | Dist. | Decl. |
| | vera 25 42 | vera 12 54 |
| 5 27 | Distant. | |
| | eadem 25 29 | Declin. 12 39½ |
| | Alt. 2½ G. | |
| | Refr. | 13 14 |
| | | 25 42 12 53½ |
| Aßumatur H. 5 M. 21 | | |
| | Dist. ♀ & ♀ | 25 42 |
| | Declin. ♀ 12 54 | austrina |
| | Declin. ♀ 2 43½ | austrina |
| | Differ. ascenf. | 23 51 28 |
| | Ascenf. R. ♀ | 346 57 10 |
| | Ascenf. R. ♀ | 323 5 40 |
| | | Decl. austr. 12 54 0 |
| | Resp. Longitudo | 21 14 42 ^{xxx} |
| | Latitudo | 1 39 4B. |

N. B.² Pro refractione ♀ vide distantias obseruatas inferius in Asterismis Australibus inter Canem minorem & finistrum pedem Orionis. Tum etiam in Asterismis Ω distant. inter Canem minorem & cor Ω.

Pro loco ♀ ex obseruat. diei 9 Januarij.

| | | |
|-------|---------------------|------------|
| H. 4½ | Dist. ♀ a ♀ | 25° 16' |
| | Declin. ♀ | 15 27 M. |
| | Declin. ♀ | 5 9 M. |
| | Afc. R. ♀ ex obser. | 343 44¾ |
| | Ang. diff. ascenf. | 23 29 25'' |
| | Ergo Afc. R. ♀ | 320 15 20 |

¹ Vide annotationem sequentem »Pro refractione ♀...«.

² E codice V.

Alt. $5\frac{1}{2}^{\circ}$ Resp. Longitudo 17 $49\frac{3}{4}^{\circ}$ \approx
 Latitudo 0 $5\frac{1}{2}$ B.
 Resp. refractio 9' 20"
 parallax 3 20
 Differentia 6 0 { in long. 3 50 s.
 in lat. 4 30 s.
 Resp. vera Longitudo 17° 45 $\frac{3}{4}$ \approx
 Latitudo 0 $1\frac{1}{2}$ B.
 Pro Ascensione recta ♀ ex qua ♀
 capta fuit.
 H. $5\frac{1}{2}$ Dift. ♀ a luc. \vee 49° 14'
 Declin. ♀ 5 10 M.
 Decl. luc. \vee 21 29
 Asc. R. eius 26 1 25"
 Ang. diff. ascenf. 42 15 $\frac{1}{2}$
 Ergo Asc. R. ♀ tum 343 46 15
 Altit. ♀ 20 $\frac{1}{2}^{\circ}$. Itaque immunis a re-
 fractione.

DIE 14 JANUARIJ, VESPERI.

H. $5\frac{1}{2}$ Dift. ♀ a ♀ 25° 10 $\frac{1}{4}$ '
 Declin. ♀ 13 7 $\frac{1}{2}$ M.
 Declin. ♀ 3 6 $\frac{1}{2}$ M.
 Asc. R. ♀ 346 28 $\frac{3}{4}$
 reducta bona
 ex obseruat.
 Ang. diff. ascenf. 23 22 30
 Asc. R. ♀ 323 6 20
 Resp. visa ♀ Longit. 21 10 55 \approx
 Alt. 3 $\frac{3}{4}^{\circ}$. Latit. 1 26 $\frac{1}{2}$ B.
 Resp. refractio 11' 20"
 parallax 4 0
 Differentia 7 20 { in long. 5 23 s.
 in lat. 4 53 s.

Vera ♀ Longitudo 21° 5 $\frac{1}{2}$ \approx
 Latitudo 1 21 $\frac{3}{4}$ B.

Pro Ascensione recta ♀ propter ♀.

H. 5 M. 4 Dift. ♀ a lucida \vee 45° 51'
 Declin. ♀ 3 7 M.
 Ang. diff. ascenf. 39 32 55"
 Ergo Asc. R. ♀ 346 28 30
 Altit. ♀ 24°

DIE 15 JANUARIJ, VESPERI.

H. $5\frac{1}{2}$ Dift. ♀ a ♀ 25° 30 $\frac{1}{2}$ '
 Declin. ♀ 12 41 $\frac{1}{2}$ M.
 Declin. ♀ 2 44 $\frac{1}{2}$ M.
 Asc. R. ♀ 346 59 45"
 Ang. diff. ascenf. 23 44 $\frac{1}{4}$
 Igitur Asc. R. ♀ 323 15 $\frac{1}{2}$
 Resp. ♀ visa Longit. 21 27 $\frac{1}{2}$ \approx
 Alt. 2 $\frac{1}{2}^{\circ}$. Latit. 1 50 $\frac{2}{3}$ B.

Resp. refractio 14 $\frac{1}{4}$ '
 parallax 4
 Differentia 10 $\frac{1}{4}$ { in long. 7 $\frac{1}{2}$ s.
 in lat. 6' 40" s.
 Ergo vera Longitudo 21° 20' \approx
 Latitudo 1 44 $\frac{1}{8}$ B.

Pro Ascensione recta ♀.

H. $5\frac{1}{2}$ Dift. ♀ a lucida \vee 45° 12 $\frac{1}{4}$ '
 Declin. ♀ 2 45 M.
 Altit. 21 $\frac{1}{2}^{\circ}$
 Ang. diff. ascenf. 39 1 35"
 Igitur Asc. R. ♀ 346 59 50

OBSERVATIONES STELLARUM FIXARUM
IN ZODIACOET PRIMO QUIDEM EARUM QUÆ SUNT IN ARIETE¹.

DIE 6 JANUARIJ.

Secunda \vee in Meridie
 per Q. Tych. 52 52 $\frac{1}{3}$
 Tertia vel lucida \vee per Volub. 55 34 $\frac{1}{4}$
 in Meridie per Q. Tych. 55 34

DIE 9 JANUARIJ.

5^H 39' 5" Luc. \vee per Merid., alt.
 per Volub. 55 34 $\frac{1}{4}$
 6 45 $\frac{3}{4}$ Lucida \vee occ. 16° 50', tran-
 sivit Lucida in \square Vrsæ per
 Merid. in alt. 41 44 $\frac{3}{4}$

¹ Omnes observationes stellarum fixarum hujus anni in codice V. solo reperiuntur.

DIE 17 JANUARIJ.

Alt. Merid. Lucidæ \vee per
Volub. 55 34 $\frac{5}{8}$

DIE 20 JANUARIJ.

Pro examinando Sextante obserua-
batur distantia inter lucidam \vee
& Aldeb. I 35 32 $\frac{1}{2}$ dubia
II 35 32 $\frac{1}{4}$
III 35 32 $\frac{1}{4}$

Ergo Sextans bene se habet, liqui-
dem hæc distantia prius reperta 35 32 $\frac{1}{8}$
quæ insensibiliter differt.

DIE 26 JANUARIJ, VESPERI.

Pro examine Sextantis accipiebatur
dist. inter Lucid. 35 32 $\frac{1}{2}$
 \vee & oculum γ & 35 32 $\frac{1}{4}$
inveniebatur 35 32 $\frac{1}{4}$

Cum itaque constaret Sextantem fa-
tis bene se habere, obseruaui postea
per eundem aliquas fixas in hunc qui
sequitur modum.

Distantia capitis \vee & capitis Andro-
medæ 27 7 $\frac{3}{4}$ bis

Altitudines sequentes per Volubilem
sunt obseruatæ.

DIE 9 JANUARIJ, VESPERI.

Secundæ in capite \vee Alt. Merid.
52 51 $\frac{1}{2}$ vtroque
Tertia & Luc. \vee in Merid.
55 34 $\frac{1}{8}$ vtroque

DIE 14 JANUARIJ.

Lucida \vee in Merid. habens Alt.
55 34 vtroque

DIE 15 JANUARIJ.

Alt. merid. Lucid. \vee 55 34 vtroque

DIE 16 JANUARIJ.

Alt. merid. lucidæ \vee 55 34 $\frac{1}{8}$ nouo
55 34 $\frac{1}{8}$ veteri

Per Q. Tychonicum.

DIE 9 JANUARIJ.

Secunda \vee altit. habuit 52 51 $\frac{1}{2}$ vtroq.
Tertia & luc. in cap. \vee 55 34 $\frac{1}{8}$ vtroq.

DIE 14 JANUARIJ.

Lucidæ \vee Merid. Alt. 55 34 vtroq.

DIE 15 JANUARIJ.

Altit. capitis \vee 55 34 vtroque

DIE 16 JANUARIJ.

Altit. Merid. Lucidæ \vee 55 34 $\frac{1}{8}$
55 34 $\frac{1}{8}$

DIE 16 DECEMBRIS.

Borealis in cornu \vee 52 50 vtroque
Lucida \vee 55 34 $\frac{1}{8}$

DIE 26 DECEMBRIS.

Alt. Luc. \vee Merid. 59 36 $\frac{1}{8}$ veteri
59 36 $\frac{1}{8}$ nouo

DIE 27 DECEMBRIS.

Borealis in cornu \vee 52 51 $\frac{1}{6}$
52 50 $\frac{5}{6}$
Alt. lucidæ \vee 55 34
55 33 $\frac{2}{3}$

DIE 31 DECEMBRIS.

Borealis in cornu \vee 52 51 veteri
52 51 $\frac{2}{3}$ nouo
Lucidæ \vee Alt. 55 34 $\frac{1}{8}$ vtroq.
Lucida in cauda \vee 59 36 veteri
(non fatis certa) 59 35 $\frac{3}{4}$ nouo

OBSERVATIONES STELLARUM IN TAURO.

DIE 6 JANUARIJ.

| | | |
|---------------------------------------|--------|---------------------|
| Infima in femore γ per Tych. | 41 | 36 $\frac{2}{3}$ |
| Alt. mer. pectoris γ per Tych. | 45 | 22 |
| Oculus γ per Q. Tych. | 49 | 42 |
| | veteri | 49 42 $\frac{1}{2}$ |
| per Q. Volub. | 49 | 42 |

DIE 20 JANUARIJ.

| | | |
|-----------------------------------|-----|---------------------------|
| Auftrale cornu γ in merid. | 54 | 54 $\frac{5}{8}$ |
| Pro examine Sextantis accepta est | | |
| dist. inter | I | 35 32 $\frac{1}{2}$ dubia |
| lucidam γ | II | 35 32 $\frac{1}{2}$ |
| & Aldeboram | III | 35 32 $\frac{1}{2}$ |

Ergo Sextans bene se habet, siquidem hæc distantia prius reperta 35 32 $\frac{1}{6}$ quod insensibiliter differt.

DIE 26 JANUARIJ.

| | | |
|---|-----------|----------------------|
| Tertia succularum, quæ est media in | | |
| infer. linea, Alt. | 48 | 59 $\frac{1}{2}$ |
| 6 56 $\frac{3}{8}$ Luc. γ occid. | 37 | 10, |
| Aldeb. Alt. Merid. | 49 | 42 |
| Dist. oculi γ & | I | 55 23 $\frac{1}{3}$ |
| genu CaBiop. | II | 55 23 $\frac{1}{2}$ |
| per Sext. | III | 55 23 $\frac{1}{2}$ |
| Aldeboram & Procyon | I | 46 20 $\frac{1}{6}$ |
| | II | 46 20 $\frac{1}{6}$ |
| | III | 46 20 $\frac{1}{4}$ |
| Aldeb. & dext. hum. Orion. | 21 | 22 $\frac{5}{6}$ bis |
| Aldeb. & sinister hume- | 15 | 46 |
| rus Orionis | 15 | 45 $\frac{5}{6}$ bis |
| Inter vtrumque oculum γ | 3 | 10 $\frac{1}{4}$ |
| | per Sext. | |

DIE 27 JANUARIJ.

| H. M. S. | Luc. γ occ. | Succu- larum | Vet. |
|----------|---------------------|--------------|---------------------------|
| 6 38 10 | 33 10 $\frac{1}{4}$ | I | 48 39 48 38 $\frac{5}{8}$ |
| 6 41 16 | 33 59 | II | 50 33 $\frac{3}{8}$ 50 34 |
| 6 46 21 | 35 14 $\frac{3}{4}$ | III | 52 16 $\frac{1}{2}$ |
| 6 53 54 | 37 8 $\frac{1}{2}$ | Aldeb. | 49 41 $\frac{5}{8}$ |

Tempus ignoratur 35 25 IV 48 59 $\frac{3}{8}$

Nota. Hæ observationes sunt satis bonæ pro stellis Hyadum.

DIE 30 JANUARIJ.

| | |
|------------------------|------------------------|
| H. 6 39' 50" | transiit Aldeb. Merid. |
| habens Alt. per Volub. | 49 42 |

Distabat tunc Luc. γ verf. occ. 37 12

DIE 5 FEBRUARIJ.

| | | |
|-------------------------|-----|---------------------|
| Inter oculum γ & | I | 45 57 |
| canem maiorem | II | 45 57 $\frac{1}{8}$ |
| | III | 45 57 $\frac{1}{6}$ |

Sequuntur Altitudines per Muralem.

DIE 14 JANUARIJ, VESPERI.

| | | |
|---------------------------------|------------|---------------------|
| Aldeb. per Merid. in Alt. | 49 | 42 |
| | alt. pinn. | 49 42 $\frac{1}{8}$ |
| Borealis cornu γ vtroque | 62 | 15 $\frac{5}{8}$ |

DIE 20 JANUARIJ.

| | | |
|------------------------------------|-----------|---------------------|
| Alt. Merid. Succular. præcedentis, | | |
| vnico saltem pinnacidio | 48 | 39 $\frac{5}{8}$ |
| Mediæ versus Austrum | 49 | 2 |
| Alt. oculi γ | vno | 49 41 $\frac{5}{8}$ |
| | alt. pin. | 49 42 |

DIE 26 JANUARIJ.

| | | |
|------------------------------------|----------|---------------------|
| Alt. Mer. Boreal. oculi γ , | | |
| | vno pin. | 52 17 $\frac{1}{8}$ |
| Aldeb. Alt. Merid. vtroque | 49 | 42 |

DIE 27 JANUARIJ.

| | | |
|-------------------------------|---------|---------------------|
| Alt. præcedentis in succulis, | | |
| | vtroque | 48 39 |
| Mediæ versus Boream, nouo | 50 | 35 |
| | veteri | 50 35 $\frac{1}{2}$ |
| Mediæ versus Austrum | 48 | 59 $\frac{5}{8}$ |
| Alt. Merid. Aldeboræ, vtroq. | 49 | 41 $\frac{5}{8}$ |

DIE 5 FEBRUARIJ.

| | | |
|----------------------------|----|------------------|
| Alt. Merid. Aldeb., vtroq. | 49 | 41 $\frac{5}{8}$ |
|----------------------------|----|------------------|

DIE 26 DECEMBRIS.

| | | |
|-----------------------------|------------------------|---------------------|
| In inter- Alt. Austral. | 41 | 37 |
| sectione in aluo γ | 41 | 36 $\frac{3}{8}$ |
| | Sequentis in | 42 19 $\frac{1}{2}$ |
| | aluo γ | 42 19 $\frac{1}{8}$ |
| Alt. pectoris γ | 45 | 21 $\frac{1}{8}$ |
| | 45 | 20 $\frac{3}{4}$ |
| Alt. genu γ | 38 | 54 $\frac{1}{8}$ |
| | vno saltem pinnacidio. | |

OBSERUATIONES STELLARUM IN GEMINIS.

DIE 6 JANUARIJ.

| | |
|---|---------------------------|
| H. 11 M. 8 Transiit superius caput II | |
| per Merid. habens Alt. | |
| per Volub. | 66 48 $\frac{1}{4}$ |
| per Tychon. | 66 48 $\frac{1}{4}$ |
| Declin. eius per Armill. | 32 41 $\frac{1}{2}$ |
| H. 11 19 $\frac{5}{8}$ Transiit inferius caput II | |
| per Merid. habens Alt. | |
| per Q. Volub. | 63 2 $\frac{1}{2}$ |
| per Q. Tychon. | nouo 63 1 $\frac{3}{4}$ |
| | veteri 63 2 $\frac{1}{4}$ |

DIE 9 JANUARIJ.

| | |
|--|----------------------------------|
| H. 11 1 $\frac{1}{2}$ Super. cap. II per Mer. Alt. | |
| per Volub. | 66 48 $\frac{1}{2}$ |
| Declinatio eius per Arm. | 31 41 $\frac{1}{2}$ |
| | vtroque |
| 11 13 32 Infer. cap. per Mer. | |
| | Alt. 63 2 |
| Declin. infer. cap. | 28 56 |
| | alt. pinnac. 28 56 $\frac{1}{8}$ |

DIE 14 JANUARIJ, VESPERI.

| | |
|-------------------------------|---------------------|
| Propus II in Mer., per Volub. | 56 39 |
| Calcis pedis II Alt. Merid. | 56 44 |
| Lucid. pes infer. II in Mer. | 50 46 $\frac{1}{2}$ |

DIE 20 JANUARIJ, VESPERI.

| | |
|------------------------------------|-------------------------|
| Inter Capellam & | I 34 19 |
| infer. cap. II | II 34 18 $\frac{1}{2}$ |
| | III 34 18 $\frac{1}{2}$ |
| Duæ posteriores sunt veriores, sed | |
| pone potius | 34 18 $\frac{2}{3}$ |

DIE 26 JANUARIJ.

| | |
|------------------------------|---------------------|
| Inter infer. caput II & | 30 33 $\frac{1}{4}$ |
| Boreale cornu ♀ | 30 33 $\frac{2}{3}$ |
| Inter infer. cap. II & cor ♀ | 36 59 $\frac{1}{8}$ |

DIE 27 JANUARIJ.

| | |
|---|---------------------|
| H. M. S. Luc. Y occ. | Alt. mer. |
| 8 31 30 61 42 Planta pedis II | 56 38 $\frac{1}{8}$ |
| 8 39 20 63 39 $\frac{1}{4}$ Altera, quæ | |
| est calx pedis | 56 44 $\frac{1}{2}$ |
| Inf. pes anteced. II | 54 29 $\frac{1}{2}$ |
| 8 54 40 67 34 $\frac{1}{2}$ Luc. pes II | 50 46 |
| Super. caput II | 66 47 $\frac{2}{3}$ |

Infer. caput II Alt. Mer. 63 2, distabat
tunc oculus ♀ a Meridie ad oc-
cafum 47 8 $\frac{1}{2}$.

Altitudines per Q. Tychonicum

DIE 9 JANUARIJ, VESPERI.

| | |
|--------------------------|--------------------|
| Alt. super. cap. II | 66 48 |
| Alt. Merid. inf. cap. II | 63 2 $\frac{1}{8}$ |

DIE 14 JANUARIJ.

| | |
|--------------------------|---------------------|
| Lucida calcis II Merid. | 50 45 $\frac{5}{8}$ |
| | alt. pinn. 50 46 |
| Alt. mer. super. cap. II | 66 48 $\frac{1}{8}$ |
| Alt. mer. infer. cap. II | 63 2 |
| | 63 1 $\frac{5}{8}$ |

DIE 15 JANUARIJ.

| | |
|--------------------|--------------------------|
| Alt. Merid. lucidæ | vet. 50 45 $\frac{2}{8}$ |
| calcis II | nouo 50 45 $\frac{1}{8}$ |

DIE 20 JANUARIJ.

| | |
|----------------------------|---------------------|
| Alt. primæ in Bor. pede II | 56 37 $\frac{2}{8}$ |
|----------------------------|---------------------|

DIE 26 JANUARIJ.

| | |
|---------------------------|--------------------------|
| Alt. Merid. Luc. pedis II | vet. 50 45 $\frac{1}{2}$ |
| | nouo 50 45 $\frac{1}{8}$ |

DIE 27 JANUARIJ.

| | |
|-------------------------|-----------------------------|
| Sequentis in Bor. pede, | |
| | vtroque 56 43 $\frac{2}{8}$ |
| Lucidæ calcis II | vtroque 50 45 $\frac{1}{2}$ |
| Infer. cap. II | nouo 63 1 $\frac{2}{8}$ |
| | veteri 63 2 |

N. B. In his non erat satis ferenum.

DIE 5 FEBRUARIJ.

| | |
|------------------|----------------------------|
| Alt. Bor. Calcis | nouo 56 43 $\frac{1}{8}$ |
| pedis II | veteri 56 43 $\frac{2}{8}$ |

DIE 17 FEBRUARIJ.

| | |
|---------------------------|-----------------------------|
| Alt. mer. plantæ pedis II | 56 37 $\frac{1}{2}$ |
| Calcis pedis II | 56 38 $\frac{1}{8}$ |
| Pedis sequentis | 54 28 $\frac{2}{8}$ |
| Lucidus pes II in Merid. | 50 45 $\frac{3}{4}$ |
| Boreale caput II | (dubia) 66 47 $\frac{5}{8}$ |
| Merid. caput II | 63 2 $\frac{1}{8}$ |

DIE 18 FEBRUARIJ.

| | | |
|--------------------|----|------------------|
| Propus II | 57 | 17 $\frac{1}{6}$ |
| Digitus pedis II | 57 | 37 $\frac{2}{3}$ |
| | | fere |
| Extrema pedis | 56 | 43 $\frac{1}{2}$ |
| Sequens in pede | 54 | 28 $\frac{2}{3}$ |
| Pedis lucida | 50 | 45 $\frac{5}{6}$ |
| Genu boreale | 59 | 32 $\frac{3}{4}$ |
| Australis pes | 47 | 20 $\frac{5}{6}$ |
| Genu medium | 55 | 10 $\frac{2}{3}$ |
| Auftrale genu | 52 | 17 $\frac{3}{4}$ |
| Femur | 56 | 44 $\frac{5}{6}$ |
| Secunda in pectore | 62 | 38 |
| Tertia in pectore | 62 | 48 $\frac{1}{2}$ |
| Boreale caput II | 66 | 48 $\frac{1}{6}$ |
| Auft. humerus | 59 | 24 $\frac{1}{6}$ |
| Merid. caput II | 63 | 2 $\frac{1}{2}$ |

DIE 21 FEBRUARIJ.

| | | |
|--------------------------------|----|------------------|
| Digitus pedis II in Mer., nouo | 56 | 37 $\frac{2}{3}$ |
| Extrema pedis nouo | 56 | 43 $\frac{2}{3}$ |
| Sequens pes | 54 | 28 $\frac{2}{3}$ |
| Lucida pedis | 50 | 46 $\frac{1}{3}$ |

| | | |
|-------------------|----|------------------|
| Boreale genu | 59 | 32 $\frac{2}{3}$ |
| Extrema pedum | 47 | 21 $\frac{1}{4}$ |
| Borealis manus | 68 | 27 $\frac{1}{2}$ |
| Media inter genua | 55 | 10 $\frac{5}{6}$ |
| Auftrale genu | 51 | 18 $\frac{1}{6}$ |
| Femur II | 56 | 45 $\frac{1}{6}$ |
| Boreale caput | 66 | 48 $\frac{1}{4}$ |
| Tertia in pectore | 61 | 49 $\frac{1}{2}$ |
| Vltima in pectore | 59 | 24 $\frac{1}{4}$ |
| Merid. caput II | 63 | 2 $\frac{1}{3}$ |

DIE 26 DECEMBRIS.

Per Volubilem Azimuthalem.

| | | |
|-----------------------------|----|-------------------------|
| Super. cap. II | 66 | 48 |
| Infer. cap. II | 63 | 2 $\frac{1}{4}$ |
| Primæ in sinistro pede | 56 | 37 $\frac{3}{4}$ |
| | 56 | 38 |
| Sequent. in eodem pede | 56 | 43 $\frac{3}{4}$ vtroq. |
| Auftral. pedis II | 47 | 21 vtroq. |
| Super. cap. II ¹ | 66 | 48 $\frac{1}{4}$ nouo |
| | | faltem pinn. |
| Infer. cap. II ¹ | 63 | 2 $\frac{1}{2}$ veteri |
| | 63 | 2 $\frac{1}{3}$ nouo |

OBSERVATIONES STELLARUM IN CANCRO.

DIE 27 JANUARIJ.

| | | |
|------------------------|----|---|
| Præsepe ☿ per Q. Tych. | 55 | 2 |
|------------------------|----|---|

DIE 5 FEBRUARIJ.

| | | |
|-------------------------------|------------------|---------------------|
| Alt. Mer. Præsepis per Volub. | 55 | 1 $\frac{1}{2}$ |
| Declinatio eius per Armillas | | |
| vno pinn. 20 | 59 | alt. 20 59 |
| 20 | 59 $\frac{1}{2}$ | 20 59 |
| 20 | 58 | 20 59 $\frac{1}{2}$ |
| 20 | 59 $\frac{1}{2}$ | |
| 20 | 59 $\frac{2}{3}$ | |

| | | |
|----------------------|----|-----------------|
| Alt. præsepis Merid. | | |
| per Tych. | 55 | 5 $\frac{1}{2}$ |

| | | |
|-------------------------|----|------------------|
| Eft itaque verosimilior | | |
| eius decl. | 20 | 59 $\frac{1}{2}$ |

| | | |
|-------------------------|----|---------------------|
| Inter cor ☿ & nebulosum | I | 22 31 $\frac{1}{6}$ |
| ☿ gyrum | II | 22 32 |

III 22 32 $\frac{1}{6}$ IIII 22 31 $\frac{1}{2}$

| | | |
|--------------------------------|----|------------------|
| Pone dist. cordis ☿ & nebulosi | 22 | 31 $\frac{1}{2}$ |
|--------------------------------|----|------------------|

DIE 17 FEBRUARIJ.

| | | |
|------------------------|----|---|
| Alt. Merid. Præsepis ☿ | 55 | 2 |
|------------------------|----|---|

¹ Forfitan per Quadrantem Tychnicum.

DIE 21 FEBRUARIJ.

| | | |
|-------------------|----|------------------|
| Præsepe Cancri | 55 | 5 $\frac{1}{2}$ |
| Afellus Boreus | 56 | 58 $\frac{1}{2}$ |
| Afellus Australis | 53 | 42 |
| In pede Auftrali | 50 | 57 $\frac{1}{2}$ |
| Chele Auftralis | 47 | 29 $\frac{1}{3}$ |

DIE 23 FEBRUARIJ.

| | | |
|------------------------------|----|------------------|
| Præsepis declin. per Armill. | 21 | 0 $\frac{1}{2}$ |
| | 21 | 0 |
| Altit. Præsepis per Volub. | 55 | 5 $\frac{1}{2}$ |
| repetita | 55 | 4 |
| Afellus bor. in Merid. | 56 | 57 $\frac{1}{2}$ |
| Afellus aufr. in Merid. | 53 | 42 $\frac{2}{3}$ |
| Per Muralem Alt. Præsepis | 55 | 5 $\frac{1}{6}$ |
| altero pinnac. | 55 | 6 $\frac{1}{3}$ |
| Eft itaque eius declinatio | | |
| indubitanter | 21 | 0 |

DIE 26 DECEMBRIS.

| | | |
|----------------------------|----|------------------|
| Alt. Bor. Afelli per Tych. | | |
| vtroq. | 56 | 58 $\frac{1}{2}$ |

OBSERVATIONES STELLARUM IN LEONE.

DIE 1 JANUARIJ.

| | | | |
|------------------------|-----|----|-------------------------------|
| Distantia inter | I | 54 | 1 ⁵ / ₆ |
| cor Ω & Spicam | II | 54 | 1 ⁵ / ₆ |
| \mathbb{M} per Sext. | III | 54 | 1 ⁵ / ₆ |
| veterem | III | 54 | 1 ⁵ / ₆ |

DIE 9 JANUARIJ, MANE.

Per Q. Tychonicum.

| | | |
|--|----|--------------------------------|
| Alt. Merid. cordis Ω , vtroq. | 48 | 2 ³ / ₈ |
| Lucida ceruicis, vtroque | 55 | 58 ³ / ₄ |
| Alt. stellæ in dorso Ω , vtroq. | 56 | 51 |
| Alt. caudæ Ω | 50 | 58 ³ / ₈ |

DIE 14 JANUARIJ.

| | | | |
|-----------------------------|--------|----|--------------------------------|
| Infimæ in collo Ω | veteri | 49 | 41 ³ / ₈ |
| | nouo | 49 | 41 ¹ / ₂ |
| Cordis Ω alt. merid. | vtroq. | 48 | 2 ³ / ₈ |
| Supremæ in collo Ω | veteri | 59 | 31 ³ / ₈ |
| | nouo | 59 | 31 ¹ / ₂ |
| Lucidæ in collo Ω | nouo | 55 | 58 ⁵ / ₆ |

DIE 26 JANUARIJ, MANE.

| | | | |
|---|------|----|--------------------------------|
| Alt. Merid. dorfi | vet. | 56 | 51 ³ / ₄ |
| Ω per Q. Tych. | nouo | 56 | 51 ³ / ₈ |
| Femur Ω per Q. Tych. | vet. | 51 | 46 ¹ / ₂ |
| | nouo | 51 | 46 ¹ / ₈ |
| Cauda Ω per Q. Tych. | | 50 | 58 ³ / ₈ |
| Alt. merid. caudæ Ω ¹ | | 50 | 59 ¹ / ₈ |

DIE 27 JANUARIJ.

| | | |
|-----------------------------|----|--------------------------------|
| Cordis Ω Alt. Merid. | 48 | 3 |
| Canis min. occid. 40 | 2, | |
| Ceruix Ω in Merid. | 55 | 59 ³ / ₈ |

DIE 21 FEBRUARIJ.

| | | | |
|--------------------------------|---------|----|------------------|
| Alt. Merid. per Q. Tychonicum. | | | |
| Lucidior in cap. Ω | vtroque | 59 | 43 $\frac{1}{3}$ |
| Sequens in capite | nouo | 62 | 0 |
| | veteri | 62 | 0 $\frac{1}{6}$ |
| Infima colli | vtroque | 52 | 50 $\frac{1}{6}$ |
| Cor Ω | nouo | 48 | 2 $\frac{5}{6}$ |
| | veteri | 48 | 3 |

¹ Forfitan per Q. Volubilem.

DIE 23 FEBRUARIJ.

Sequentes Altitudines per Q. Volubilem sunt obseruatæ.

| | | |
|---------------------------|----|--------------------------------|
| Pectus Ω | 45 | 30 ¹ / ₆ |
| Extrema finiftri pedis | 42 | 23 ⁵ / ₆ |
| Sequens pedis eiusdem | 43 | 39 ¹ / ₂ |
| Infima in coxa Ω | 51 | 46 ⁵ / ₈ |
| Extrema in dextro pede | 42 | 3 ³ / ₈ |
| Media pedis eiusdem | 46 | 52 ⁵ / ₆ |
| Cauda Ω in meridie | 50 | 58 ³ / ₈ |

DIE 3 MARTIJ AD VESPERAS.

| | | | |
|-----------------------------|-----|----|--------------------------------|
| Inter cor & caudam Ω | I | 24 | 40 ¹ / ₂ |
| | II | 24 | 40 ¹ / ₂ |
| | III | 24 | 40 ¹ / ₂ |

DIE 5 MARTIJ.

| | | |
|-------------------------|------|--------|
| Declinatio caudæ Ω Bor. | 16 | 53½ |
| Inter Arcturum & | I | 35 21½ |
| caudam Ω per | II | 35 22 |
| Sextantem | III | 35 21¼ |
| | IIII | 35 21½ |

DIE 10 MARTIJ.

| | | |
|--------------------------|----|--------------------------------|
| Inter Arcturum & | 55 | 20 ¹ / ₂ |
| Lucid. ceruicis Ω | 55 | 20 ¹ / ₂ |
| | 55 | 20 ³ / ₈ |

DIE 26 DECEMBRIS.

| | | | |
|---------------------|--------|----|-----|
| Alt. oris Ω | | 59 | 43½ |
| Cordis Ω | | 48 | 3 |
| Lucidæ in ceruice Ω | | 56 | 0 |
| Caudæ Ω | | 50 | 59 |
| Alt. stellæ infimæ | nouo | 52 | 50⅓ |
| in collo Ω | vet. | 52 | 50⅓ |
| Supremæ in | veteri | 59 | 32⅓ |
| collo Ω | nouo | 59 | 32 |
| Lucidæ seu mediæ | | 55 | 59¼ |
| in collo Ω | | 55 | 59⅓ |
| Alt. cordis Ω | veteri | 48 | 2⅜ |
| | nouo | 48 | 2½ |
| Alt. coxæ Ω | | 56 | 52 |
| | | 56 | 51⅜ |
| Femoris eiusdem | | 51 | 46⅓ |
| | | 51 | 46 |
| Alt. caudæ Ω | | 50 | 59 |
| | | 50 | 58¾ |

OBSERVATIONES STELLARUM IN VIRGINE.

DIE 9 JANUARIJ.

Matutino tempore.

Alt. mediæ trium in dextra ala \mathfrak{M}
per Tychon. 39 $45\frac{1}{3}$ Vet. pinn. 39 $45\frac{2}{3}$ H. 4 38' 4" Transiuit Vindemiator per
Merid. & habuit altitudinem
per Volub. 47 18
per Tychon, vet. 47 $18\frac{1}{2}$
nouo 47 18

Vltima inferioris ala

per Volub. 30 41

H. 4 54' 36" Spica \mathfrak{M} in 25 $8\frac{1}{6}$
mer. per Tychon. nouo 25 8Borealis pes \mathfrak{M} per Volub. 30 $28\frac{1}{6}$ Informis supra Bor. pedem \mathfrak{M}
per Volub. 37 $47\frac{1}{2}$

DIE 11 JANUARIJ.

Cingulum \mathfrak{M} in merid. 39 $46\frac{1}{4}$ H. 4 29' 5" Vindemiator in
mer. 47 $17\frac{5}{6}$ Spicæ \mathfrak{M} alt. mer. per Tych. 25 8
25 $8\frac{1}{4}$ Genu \mathfrak{M} alt. merid. 35 39Decl. Spicæ vltra merid. 8 $57\frac{1}{2}$
alt. pinn. 8 $57\frac{1}{2}$

Vultur or. Spica occ.

7^H 4' 40" 63 $42\frac{1}{4}$ 32 $58\frac{1}{2}$ 96 $40\frac{3}{4}$

7 6 45 63 13 33 28 96 41

7 8 55 62 43 33 58 96 41

His æquatorijs distantijs Vulturis &
Spicæ non fidendum, nam vera æqua-
toria distantia est 96 45, forte propter
refractionem.

DIE 14 JANUARIJ.

Spica \mathfrak{M} per meri- nouo 25 $7\frac{3}{4}$
dianum per Tych. vet. 25 8

DIE 26 JANUARIJ.

Primæ austr. alæ \mathfrak{M} alt. mer. 38 $11\frac{1}{2}$ Secunda in austr. ala 35 $43\frac{1}{3}$ 3 in austr. alaper Tych., vtroq. 34 $55\frac{5}{6}$ Media alæ ejusd. per Tych. 39 $45\frac{1}{2}$
per Sextant. 39 $45\frac{5}{6}$ H. 3 21' 20" Vindemiator per
merid., alt. 47 $17\frac{3}{4}$ Eadem per Sext. 47 $17\frac{1}{2}$

Extremæ infer. alæ alt. mer. 30 47

H. 3 42 17, Cor Ω occ. 49 $18\frac{1}{4}$ transiuitSpica \mathfrak{M} per merid. in alt. 25 8 25per Tychon. 25 $8\frac{1}{4}$

per Sextantem 25 8

Penultima Bor. alæ, alt. mer. 37 $41\frac{3}{8}$

DIE 27 JANUARIJ.

Spicæ \mathfrak{M} per Volub. 25 $8\frac{1}{3}$ alt. merid. per Tychon. 25 $7\frac{3}{4}$

25 8

vet. pin. 25 $7\frac{5}{6}$

per Sext. 25 8

Poterit exacta esse Spicæ \mathfrak{M} Alt. per Volub. 25 $8\frac{1}{4}$

Nota. Ex his obseruationibus in Spi-
ca \mathfrak{M} cum aliquot præcedentium an-
norum per muralem & portatilem fac-
tis colligitur, quod si posueris Spicæ
 \mathfrak{M} alt. merid. mense Januario huius
anni 25° 8' 10", insensibiliter prorsus
aberrabis, adeo vt error vix esse possit
5" in alterutram partem. Et pone Poli
alt. 55 54 40, atque hac ratione insen-
sibiliter aberrabis, nusquam 10 scru-
pulis secundis declinationem maxi-
mam Eclipticæ constare 23 31 $\frac{1}{2}$.

Est itaque declinatio Spicæ \mathfrak{M} hoc
anno in Januario exacte 8 57 10, vnde
prouenit eius longitudo pro supposita
latitudine ipsius 1 59 $\frac{1}{2}$ in 18 4 $\frac{1}{4}$ Ω ¹. Cæ-
teræ nostræ obseruationes absumunt
ipsam in 18 5 Ω . Insensibiliter aber-
rabis si posueris Spicæ longitudinem
ad huius anni initium in 18 4 $\frac{1}{2}$ Ω .

DIE 29 JANUARIJ, MANE.

Cum Cor Ω abesset a merid. versus
occasum 49 20, transiuit Spica \mathfrak{M} per
merid. in alt. per Volub. 25 $8\frac{1}{3}$
per Q. Tych. 25 8
25 $7\frac{5}{6}$

¹ Cf. T. II. p. 220.

DIE 23 FEBRUARIJ.

| | |
|--|---------------------|
| Alt. primæ in \square capitis \mathfrak{M} | |
| per Volubilem | 42 56 $\frac{1}{4}$ |
| Secundæ in \square eiusdem | 44 50 |
| Primæ in austr. ala \mathfrak{M} | 38 12 $\frac{1}{8}$ |
| Tertiæ in \square capitis \mathfrak{M} | 43 2 |
| Quartæ in \square capitis \mathfrak{M} | 45 9 $\frac{1}{2}$ |
| Mediæ Austr. alæ \mathfrak{M} | 35 44 $\frac{3}{4}$ |

DIE 2 MARTIJ.

| | |
|------------------------------|------------------------|
| II Austr. alæ alt. mer. | |
| per Volub. | 35 45 |
| III Austr. alæ alt. mer. | 34 56 $\frac{1}{2}$ |
| Inter II & III Austr. | I 5 32 |
| alæ \mathfrak{M} per Sext. | II 5 31 $\frac{1}{3}$ |
| veterem | III 5 31 $\frac{1}{2}$ |
| Inter III Austr. alæ | I 14 29 |
| & Spicam | II 14 29 $\frac{1}{4}$ |
| Inter II Austr. alæ | I 19 15 $\frac{2}{3}$ |
| & Spicam | II 19 16 |
| Inter III Austr. alæ | I 40 22 |
| & cor Ω | II 40 22 $\frac{1}{4}$ |
| Inter II Austr. alæ | I 34 58 |
| & cor Ω | II 34 58 $\frac{1}{6}$ |

DIE 3 MARTIJ.

| | |
|---------------------------|-------------------------|
| Inter cor Ω & Vin- | I 42 33 $\frac{5}{6}$ |
| demiatozem | II 42 33 $\frac{5}{6}$ |
| | III 42 33 $\frac{2}{3}$ |
| Inter Vindemiatozem | 18 10 $\frac{1}{6}$ |
| & caudam Ω | 18 10 $\frac{1}{6}$ |

| | |
|-----------------------------------|-------------------------|
| Inter cor Ω & I | I 27 14 $\frac{1}{2}$ |
| Austr. alæ \mathfrak{M} | II 27 14 $\frac{1}{2}$ |
| per Sext. vet. | III 27 14 $\frac{1}{2}$ |
| Declin. Vindemiatoris | 13 12 $\frac{1}{2}$ |
| Decl. I alæ Austr. \mathfrak{M} | 4 5 $\frac{1}{2}$ |
| Alt. merid. Secundæ in ala | 35 45 |
| Tertiæ in ala | 34 56 $\frac{1}{2}$ |
| Declin. II alæ | 1 39 |
| Declin. III alæ | 0 51 |
| Inter secundam & tertiam | |
| in australi ala \mathfrak{M} | 5 31 $\frac{1}{2}$ |
| Inter secundam & Spicam | 14 29 $\frac{1}{6}$ |
| Inter tertiam & Spicam | 19 15 $\frac{5}{6}$ |
| Inter secundam & cor Ω | 34 58 $\frac{1}{2}$ |
| Inter tertiam & cor Ω | 40 22 $\frac{1}{6}$ |

DIE 5 MARTIJ.

| | |
|-------------------------------|--------------------|
| H. 1 25' 50" Spica per merid. | |
| in Alt. | 25 8 $\frac{1}{4}$ |

DIE 5 MAIJ.

| | |
|----------------------|-------------------------------|
| Spicæ \mathfrak{M} | per Volub. 25 8 $\frac{1}{2}$ |
| alt. merid. | per Tych. 25 8 $\frac{1}{4}$ |

DIE 6 MAIJ.

| | |
|----------------------|-------------------------------|
| Spicæ \mathfrak{M} | per Volub. 25 8 $\frac{1}{2}$ |
| alt. merid. | per Tych. 25 8 $\frac{1}{6}$ |

DIE 26 DECEMBRIS.

| | |
|------------------------------|--------------------|
| Alt. Spicæ per Tych., vtroq. | 25 8 $\frac{1}{6}$ |
|------------------------------|--------------------|

OBSERVATIONES STELLARUM IN LIBRA.

DIE 9 JANUARIJ, MANE.

| | |
|--------------------------------|---------------------|
| Auft. lanx Ω per Volub. | 19 51 |
| per Tychon. | 19 51 $\frac{2}{3}$ |
| | 19 51 $\frac{1}{6}$ |

DIE 11 JANUARIJ.

| | |
|----------------------------|---------------------|
| Alt. merid. præced. lancis | |
| per Tych. | 19 51 $\frac{2}{3}$ |
| | 19 51 $\frac{3}{4}$ |

| | |
|----------------------------|---------------------|
| Sequentis lancis per Tych. | 26 18 $\frac{1}{2}$ |
| | 26 18 $\frac{2}{3}$ |

DIE 14 JANUARIJ.

| | |
|-----------------------------|---------------------|
| Austr. lanx in merid. | 19 52 $\frac{1}{2}$ |
| Bor. lanx per Tych., vtroq. | 26 18 $\frac{1}{2}$ |

DIE 26 JANUARIJ, MANE.

| | |
|-----------------------|---------------------|
| Austr. lanx in merid. | 19 51 $\frac{1}{2}$ |
| per Tychon. | 19 51 $\frac{1}{4}$ |
| | 19 51 $\frac{1}{3}$ |

| | |
|-------------------------|---------------------|
| Borealis lanx in merid. | 26 19 $\frac{1}{2}$ |
| per Tych., vtroque | 26 18 $\frac{2}{3}$ |

DIE 29 JANUARIJ.

| | |
|-----------------------------------|---------------------|
| Australis lanx Ω in merid. | |
| per Volub. | 19 51 $\frac{1}{4}$ |

OBSERVATIONES STELLARUM SAGITTARIJ.

DIE 11 APRILIS.

Inter os Pegasi & med. cap. \times^{\uparrow} 50 13

DIE 28 APRILIS.

Declin. mediæ cap. \times^{\uparrow} Auftr. 22 8 $\frac{1}{2}$ Dist. med. cap. \times^{\uparrow} 50 13

ab ore Pegasi 50 14

50 13 $\frac{1}{2}$

DIE 30 APRILIS.

Decl. med. cap. \times^{\uparrow} Mer. 22 8

Inter mediam capitum I 50 15

 \times^{\uparrow} & os Pegasi per II 50 13

Sext. vet. III 50 14

III 50 13

V 50 13

DIE 25 AUGUSTI P. M.

Declinatio finiftri 26 35 $\frac{3}{4}$ M.hum. \times^{\uparrow} 26 36Declinatio iaculi \times^{\uparrow} 27 12 M.27 12 $\frac{1}{2}$ Anteced. capitis \times^{\uparrow} 21 30 M.21 29 $\frac{3}{4}$ Mediæ capitis \times^{\uparrow} 22 11 M.22 10 $\frac{1}{2}$ Sequentis capitis \times^{\uparrow} 21 32 M.21 31 $\frac{1}{2}$

Mediæ super scapu-

lam dextram \times^{\uparrow} 18 29 $\frac{1}{2}$

18 30

Sequens supra scapu-

16 36 $\frac{5}{8}$ M.lam \times^{\uparrow} 16 37 $\frac{1}{4}$

Declinatio Auftr. 25 24 M.

arcus \times^{\uparrow} 25 24 $\frac{1}{3}$ Declin. eius quæ apud 25 36 $\frac{1}{2}$ dext. cubitum est in \times^{\uparrow} 25 36 $\frac{2}{3}$

DIE 28 AUGUSTI.

Inter dext. hum. \approx & 47 39orientaliorem cap. \times^{\uparrow} 47 38 $\frac{1}{2}$ Inter dext. hum. \approx & 48 58 $\frac{1}{2}$ med. cap. \times^{\uparrow} 48 58

48 59

Dist. inter hum. \approx & 50 17 $\frac{1}{4}$ præced. cap. \times^{\uparrow} 50 1750 17 $\frac{1}{2}$

DIE 29 AUGUSTI.

Inter luc. hum. \times^{\uparrow} & dext.hum. \approx 52 35

OBSERVATIONES STELLARUM IN CAPRICORNO.

DIE 25 AUGUSTI P. M.

Superius cornu Z Decl. 13 42 M.

13 42

Inferius cornu Z declin. 15 5815 58 $\frac{1}{2}$

DIE 28 AUGUSTI.

Inter superius cornu Z 47 36& caput Ophiuchi 47 35 $\frac{1}{2}$

47 36

Inter inferius cornu Z 49 22

& caput Ophiuchi 49 22

DIE 29 AUGUSTI.

Alt. mer. præc. caudæ Z

per Sext. nouum 15 41

per Q. minim. 15 39

Sequentis caudæ (Sext. nou. 16 12

alt. mer. per (Q. minim. 16 11

DIE 22 NOUEMBRIS.

Inter dext. hum. \approx 29 22 $\frac{3}{4}$ & superius cornu Z 29 22 $\frac{3}{4}$ Inter dext. hum. \approx 29 37& infer. cornu Z 29 37Inter Vult. & super. 22 21 $\frac{1}{2}$ cornu Z 22 22

Inter Vult. & inferius 24 43

cornu Z 24 43 $\frac{1}{4}$

OBSERVATIONES STELLARUM IN AQUARIO.

DIE 28 AUGUSTI.

| | |
|----------------------|--------|
| Inter dext. hum. ☿ & | 47 39 |
| orient. caput ♄ | 47 38½ |
| Inter dext. hum. ☿ & | 48 58½ |
| med. cap. ♄ | 48 58 |
| | 48 59 |
| Inter dext. hum. ☿ & | 50 17½ |
| præced. cap. ♄ | 50 17 |
| | 50 17½ |
| Inter genu Antinoi & | 37 42 |
| dextrum humerum ☿ | 37 41½ |
| | 37 42 |

DIE 29 AUGUSTI, MANE.

| | |
|------------------------|--------|
| Inter luc. humerum ♄ & | 52 35 |
| dext. hum. ☿ | 52 35 |
| Inter genu Antinoi & | 37 42 |
| dext. hum. ☿ | 37 43 |
| | 37 42½ |

Vesper

| | |
|--------------------------------------|--------|
| Alt. merid. lucidæ in finist. manu ☿ | |
| per Sext. nou. | 23 12 |
| per Sext. vet. | 23 11½ |
| per Q. minim. | 23 10½ |

DIE 15 NOUEMBRIS.

| | |
|-------------------------|--------|
| Inter finist. humerum ☿ | 48 25½ |
| & caudam Ceti | 48 25¾ |
| | 48 25⅝ |

DIE 16 NOUEMBRIS.

| | |
|-----------------------|--------|
| Inter Aquilam & | 27 54¼ |
| caput ☿ | 27 55 |
| | 27 54 |
| Inter dext. humerum ☿ | 7 0 |
| & caput ☿ | 7 1½ |
| | 6 59¾ |

Nota. Os Pegasi & sinister humerus ☿, item lucidior Equiculi & dexter humerus, si per eas ducantur binæ lineæ, quoad visum ambæ transeunt per caput ☿. Ergo vbi hæc se interfecant erit eius locus, sed hæc non satis exacta, tantum in ipsis minutis.

| | |
|--------------------|------|
| Inter caput Pegasi | 8 34 |
| & caput ☿ | 8 36 |

DIE 17 NOUEMBRIS.

| | |
|-------------------------|------|
| Inter finist. hume- | 29 0 |
| rum ☿ & Vulturem | 29 1 |
| | 29 0 |
| Inter finist. hume- | 8 9 |
| rum ☿ & caput eius | 8 8 |
| | 8 7½ |
| | 8 7 |
| Inter dextrum humerum ☿ | 7 1½ |
| & caput ☿ | 7 1¼ |
| Inter caput Pegasi | 8 32 |
| & caput ☿ | 8 32 |

DIE 21 NOUEMBRIS.

| | |
|------------------------------|------------|
| Inter luc. finist. manus ☿ | |
| & Vulturem | 23 10½ bis |
| Inter lucid. finist. manus ☿ | 21 27 |
| & dext. humerum ☿ | 21 27½ |
| Inter supremam in vrna ☿ | 39 12½ |
| & Vulturem | 39 12¾ |
| Inter dext. brachium | 38 58¾ |
| & Vulturem | 38 59 |
| Declinatio lucidæ finistræ | |
| manus ☿ | 10 54 |
| | Auft. |

DIE 22 NOUEMBRIS.

| | |
|---------------------------------|--------|
| Inter supremam in dextra manu ☿ | |
| & Vulturem | 39 13 |
| Inter dext. brachium ☿ | |
| & Vult. | 38 59½ |
| Inter extremam alæ Pegasi | 29 39 |
| & suprem. dext. manus ☿ | 29 39¼ |
| Dist. iusto minor, sit enim | 30 0 |
| Inter extremam alæ | 32 10¾ |
| Pegasi & dext. | 32 11½ |
| brachium ☿ | 32 11½ |
| Inter dext. hum. ☿ | 29 22¾ |
| & superius cornu ♄ | 29 22¾ |
| Inter Vultur. & fin. hum. ☿ | 29 0½ |
| Inter Vult. & dext. hum. ☿ | 34 54¼ |
| Inter Vulturem & præced. ex | |
| medijs in dextra manu ☿ | 40 22⅝ |
| Inter Vulturem & postre- | |
| mam in dextra manu | 42 0 |
| Inter caudam Ceti & | 48 24 |
| finist. humerum ☿ | 48 24¼ |

| | |
|---|---------------------|
| Inter caudam Ceti & dext. humerum ☿ | 42 33 $\frac{1}{2}$ |
| Inter caudam Ceti & dext. brachium ☿ | 42 33 $\frac{2}{3}$ |
| Inter caudam Ceti & præce- dentem ex medijs dua- bus in manu dextra ☿ | 30 14 |
| | 30 13 $\frac{1}{2}$ |
| Inter caudam Ceti & sequen- tem ex duabus medijs in dextra manu ☿ | 28 55 $\frac{1}{2}$ |
| | 28 55 $\frac{2}{3}$ |
| | 28 55 $\frac{1}{2}$ |
| | 27 20 |
| | 27 20 $\frac{1}{6}$ |

| | | |
|--|---------------------|---------------------|
| Inter caudam Ceti & supre- mam dextræ manus ☿ | 30 12 $\frac{1}{2}$ | |
| | 30 12 | |
| | Azim. occ. | Alt. |
| Suprema in | 45 55 | 24 31 $\frac{3}{4}$ |
| dextra manu | 46 57 | 24 7 $\frac{1}{2}$ |
| ☿ | 47 34 | 23 52 |
| Brachium | 47 54 | 20 45 |
| dextrum ☿ | 48 30 | 20 17 $\frac{1}{2}$ |
| | 49 5 | 20 12 $\frac{3}{4}$ |

OBSERVATIONES STELLARUM IN PISCIBUS.

DIE 22 NOUEMBRIS.

| | |
|---|---------------------|
| Inter os Pegasi & os Piscis | 20 40 $\frac{3}{4}$ |
| | 20 40 $\frac{3}{4}$ |
| Inter os Pegasi & mandibulam ☿ | 22 55 $\frac{1}{2}$ |
| | 22 55 $\frac{3}{4}$ |
| Inter os Pegasi & præced. in ventre ☿ | 26 57 $\frac{1}{2}$ |
| | 26 57 $\frac{1}{2}$ |
| Inter os Pegasi & sequent. in ventre ☿ | 30 22 $\frac{3}{4}$ |
| | 30 22 $\frac{3}{4}$ |
| Inter os Pegasi & præced. in dorso ☿ | 25 56 $\frac{1}{2}$ |
| | 25 56 $\frac{1}{6}$ |

| | |
|--|---------------------|
| Inter os Pegasi & sequentem in dorso ☿ | 28 55 |
| | 28 55 $\frac{1}{6}$ |
| Inter os Pegasi & caudam ☿ | 33 31 |
| | 33 31 |
| Inter os Pegasi & stellulam in capite ☿ | 24 11 $\frac{1}{4}$ |
| | 24 11 $\frac{3}{4}$ |

DIE 31 DECEMBRIS.

| | |
|---------------------------|---------------------|
| Altitudo caudæ Borealis ☿ | 47 17 $\frac{1}{6}$ |
| nouo pinnacidio | 47 17 |

OBSERVATIONES STELLARUM IN ASTERISMIS
BOREALIBUS EXTRA ZODIACUM.

DIE 6 JANUARIJ.

| | |
|------------------------------|---------------------|
| Altit. stellæ Polaris maxima | 58 50 $\frac{1}{2}$ |
| Quando erat in Azim. occ. | |
| 0 19, | 58 50 $\frac{1}{8}$ |
| In Azimutho 0 27 fuit alt. | 58 50 |
| 0 33 | 58 49 $\frac{5}{6}$ |

Versus septentrionem.

| | |
|--|---------------------|
| Genu CaBiopeæ alt. max. | 87 51 $\frac{1}{6}$ |
| Mediæ caudæ vrsæ maioris alt. min. | 23 0 $\frac{1}{4}$ |
| H. 6 53' 37" Lucida duarum in ☐ vrsæ min. transiit merid. in alt. mi- nima | 41 45 0 |
| Distabat tunc oculus ☿ a Mer. or. | 20 21 $\frac{3}{4}$ |
| H. 7 22 50 Transiit minor in ☐ vrsæ minoris meridianum in alt. mi- nima | 39 12 $\frac{1}{3}$ |

| | |
|----------------------|---------------------|
| Eiusdem per Armillas | 73 20 |
| declinatio alt. pin. | 73 20 $\frac{1}{4}$ |

Versus austrum.

| | |
|--|--------------------------|
| H. 6 44' 35" Capitis Algol alt. mer. | 73 23 $\frac{3}{8}$ |
| Distabat tunc oculus ☿ or. | 22 38 $\frac{3}{8}$ |
| Differentia transitus in æquatore inter caput Algol & lucidam in ☐ vrsæ min. est | 2 17 |
| H. 6 58 20 Luc. Perf. per merid. | 82 24 $\frac{1}{2}$ |
| Declin. capitis Algol vtroq. | 39 17 $\frac{1}{2}$ |
| Repetita declin. eadem vno | 39 17 $\frac{1}{2}$ |
| | alt. 39 17 $\frac{1}{4}$ |
| Declin. lucidæ Persei vtroq. | 48 19 |

Hæc declinatio satis bene cum de-
clinatione per Quadrantem consentit,
nam eandem præcise exhibuit.

Præced. in Planta Perfei per Tych.

| | | |
|--|-----|-------------------------|
| | 65 | 0 |
| Sequentis in Planta Perfei | 64 | 40 $\frac{5}{8}$ |
| alt. per Tych. vet. pin. | 64 | 41 |
| Erichtonij pes communis | | |
| cum cornu γ | 62 | 16 $\frac{1}{2}$ |
| H. 11 $\frac{1}{2}$ Distantia inter lucidam Perfei | | |
| & lucidiorem in \square vrsæ minoris, | | |
| quæ simul fere | I | 55 50 $\frac{1}{2}$ bis |
| merid. transierunt | II | 55 50 $\frac{1}{2}$ |
| per Sext. vet. | III | 55 50 $\frac{1}{4}$ |

Hinc poterit rimari tam Poli altitudo, quam instrumentorum certitudo, vt scis.

| | | |
|-----------------------|-----------|---------------------|
| Declin. extremæ caudæ | 51 | 23 $\frac{1}{2}$ |
| vrsæ mai. | alt. pin. | 51 23 $\frac{1}{2}$ |
| Declin. mediæ caudæ | 57 | 6 $\frac{1}{4}$ |
| vrsæ maior. | altero | 57 6 |

Distabat tunc vtraque stella a Polo ad ortum.

DIE 9 JANUARIJ, MANE.

| | | |
|---|----|------------------|
| H. 4 $\frac{1}{2}$ Alt. Polaris Stellæ minima | 52 | 58 $\frac{3}{4}$ |
|---|----|------------------|

Erat raris quibusdam nubibus non-nihil offuscata.

| | | |
|--|----|------------------|
| H. 4 26' 40" Flexura Caßiopeæ in meridiano habuit alt. minimam | | |
| per Volub. | 24 | 23 $\frac{3}{8}$ |
| H. 4 56 18 Genu Cassiopeæ alt. min. | | |
| per Volub. | 23 | 58 $\frac{1}{2}$ |

In his erat bene ferenum.

| | | |
|--|------|---------------------|
| Sura Bootis, quæ simul cum extrema in cauda vrsæ maioris meridianum transit, habuit alt. | | |
| per Volub. | 54 | 36 |
| per Tychon. | vet. | 54 36 |
| | nouo | 54 35 $\frac{5}{8}$ |

| | | |
|-----------------------------|----|------------------|
| Arcturus in merid. per Vol. | 55 | 28 $\frac{1}{2}$ |
| per Tychon., vtroque | 55 | 28 |

| | | |
|----------------------|----|----|
| Sinister hum. Bootis | | |
| per Volub. | 66 | 23 |

| | | |
|---------------------------|----|------------------|
| Dexter pes Bootis in mer. | | |
| per Vol. | 49 | 40 $\frac{1}{2}$ |

| | | |
|--|----|---|
| H. 6 50 7 Transiuit lucida in \square vrsæ maioris per Merid. in alt. max. | | |
| per Volub. | 70 | 5 |

Post meridiem.

Cum Caßiopea esset versus occasum circa H. 6 $\frac{1}{2}$ obseruabantur aliquot eius stellæ in declinatione per Armillas eo quod tunc distaret a polo versus occasum, experiundi declinationem & instrumenti situm gratia in hunc modum.

| | | |
|-----------------|------|---------------------|
| Lucidæ Cathedræ | vno | 54 16 |
| declinatio | alt. | 54 16 $\frac{1}{8}$ |
| Flexuræ declin. | vno | 58 28 |
| | alt. | 58 28 $\frac{1}{4}$ |

| | | |
|--------------------------------|----|------------------|
| Alt. merid. dext. humeri | | |
| Perfei per Volub. | 85 | 55 |
| Caput Algol alt. mer. per Vol. | 73 | 23 $\frac{1}{2}$ |

| | | |
|--|----|------------------|
| H. 6 45 45 Lucida γ occ., transiuit lucida in \square vrsæ per merid. in alt. | | |
| | 41 | 44 $\frac{3}{4}$ |

| | | |
|--|----|------------------|
| H. 6 50 5 Transiuit lucida lateris Perfei per Merid. habens alt. | 82 | 24 $\frac{5}{8}$ |
|--|----|------------------|

| | | |
|--------------------------------------|----|------------------|
| Habuit tunc luc. γ remotionem | 17 | 54 $\frac{3}{4}$ |
|--------------------------------------|----|------------------|

Nota. Hæ duæ stellæ fere simul meridiem transeunt, interuallo in æquatore existente 1° 5'. Hinc poterit tam altitudinis quam distantiarum & tam Sextans quam Quadrans comprobari, vt scis.

| | | |
|-------------------------------------|----|------------------|
| Declin. min. in \square vrsæ min. | 73 | 19 $\frac{3}{4}$ |
|-------------------------------------|----|------------------|

| | | |
|--|----|------------------|
| H. 7 14 $\frac{1}{2}$ Alt. sequentis alterius in vrsæ minore | 39 | 12 $\frac{1}{4}$ |
|--|----|------------------|

| | | |
|---|---|------------------|
| H. 10 16 Lucidæ lyræ alt. min. per Volub. | 4 | 29 $\frac{1}{2}$ |
|---|---|------------------|

Obseruabatur declinatio lucidæ Perfei per Armillas versus occ. 48 19 vtroque pinn., idque satis conuenit cum declinatione in meridiano accepta & ea quæ versus orientem in consimili a Polo situ capiebatur, quod indicium est axin Armillarum meridianum satis bene respondere.

| | | |
|---------------------|----|------------------|
| Caput Medusæ habuit | 39 | 17 |
| declin. | 39 | 17 $\frac{1}{2}$ |

Hæc minus certa propter ζ , medio-cris tamen.

| | | |
|--|----|----------------------|
| Inter lucid. Perfei & luc. in \square vrsæ minoris | 55 | 50 $\frac{1}{2}$ bis |
|--|----|----------------------|

Hinc verificentur altitudines.

| | | |
|-------------------------|----|------------------|
| Declin. extremæ caudæ | 51 | 23 $\frac{1}{2}$ |
| vr̄fæ maioris alt. pin. | 51 | 23 $\frac{3}{4}$ |
| Declin. mediæ in | 57 | 6 |
| cauda eiusdem alt. pin. | 57 | 6 $\frac{1}{2}$ |

Distabat tunc vtraque stella a Polo ad ortum.

| | | |
|------------------------------|----|------------------|
| Dist. inter extremam caudæ I | 30 | 52 $\frac{3}{4}$ |
| vr̄fæ maioris & suram II | 30 | 52 $\frac{3}{4}$ |
| Bootis per Sext. vet. III | 30 | 52 $\frac{3}{4}$ |

Hinc possunt verificari altitudines quadrantis.

H. 2 29 $\frac{1}{2}$ Alt. maxima prioris antecedentium in \square vr̄fæ maioris per Volub.

| | | |
|----------------------------------|----|------------------|
| Alt. max. sequentis in \square | 81 | 58 $\frac{1}{2}$ |
| Declin. prioris in \square | 58 | 33 $\frac{3}{4}$ |
| vr̄fæ maioris | 58 | 33 $\frac{1}{2}$ |

Declin. sequentis in \square eiusdem vtroque pinnac.

Tertiæ in \square vr̄fæ mai. alt. max.

Declinatio eiusdem

Vltimæ in \square vr̄fæ mai. alt. max.

Declinatio eiusdem

Luc. Cathedræ Caßiop. alt. min.

Declinatio eiusdem

H. 4 10' 40" Schedir alt. minima

Declin. eiusdem

4 13 15 Stellæ Polaris alt. min. 52 58 55

4 24 26 Flexuræ Caßiop. alt. min.

Declin. vtroque pin. 58 31 $\frac{1}{2}$

Lucidæ pedis Caßiop.

alt. min. 27 29 $\frac{5}{8}$

Versus Austrum

Extremæ caudæ vr̄fæ mai. alt. max. 85 30

Sura Bootis, quæ fere meridianum cum illa extrema caudæ vr̄fæ maioris transit, habuit alt. 54 35 $\frac{5}{8}$

DIE 11 JANUARIJ, MANE.

H. 4 4' 31" Schedir Caßiop.

alt. min. 20 10 $\frac{1}{2}$

4 8 4 Stellæ Polaris alt. min. 52 58 55

alt. min. 52 59

4 19 30 Flexuræ Caßiopeæ alt. min. 24 22 $\frac{1}{4}$

4 46 33 Genu Caßiopeæ alt. min. 23 58 $\frac{1}{2}$

4 54 50 Mediæ in cauda vr̄fæ mai. altit. maxima 88 49 $\frac{1}{2}$

5 12 50 Pedis Caß. alt. min. 27 30

5 19 9 Extremæ caudæ vr̄fæ mai. altit. maxima 85 29 $\frac{3}{4}$

5 23 7 Suræ Bootis alt. mer. 54 36

5 45 29 Arcturus in merid. 55 28 $\frac{5}{8}$

Declin. luc. in \square vr̄fæ supra polum alt. pin. 75 48 $\frac{1}{2}$

Declin. minus luc. in \square vr̄fæ alt. pin. 73 16 $\frac{1}{2}$

Eadem repetita 73 16

Repetita superioris luc. in \square 75 48 $\frac{1}{3}$

6 41 50 Luc. in \square vr̄fæ min. 70 4 $\frac{1}{2}$

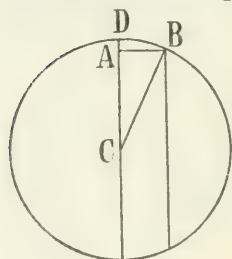
6 44 0 Persei lucida per merid. infra Polum 14 13 $\frac{1}{2}$

Alt. max. minoris in \square vr̄fæ minoris 72 35

Declin. lucidæ Vulturis versum ortum 7 51 $\frac{1}{2}$

Fuit tunc Alt. Vult. 20 gr.

Obseruabatur polaris stella in certo Azimuto vna cum stella aliqua ex qua ipfius distantia a meridiano per gradus æquatoris cognoscitur, vt lucida γ .



Quoniam BC est nota 2° 55' 50" et angulus ACB notus per differentiam transitus lucidæ γ a transitu polaris prius nota, angulus vero ad A rectus, ideo dabitur AB & AC, quod vero deficit, AC est addendum altitudini obseruatæ vt sit vera. Vel per tabulam sinuum anguli essent lineæ rectæ in hunc modum vt sequitur.

Vide anguli quantitatem AB, eius sinum cape quæ

respondeat lateri DA qui fit sinus versus vel sagitta. Postea per Regulam detri dic

Operatio. Anguli distantiae polaris a meridiano in æquatore sinum secundum qui fit accipiendo eius complementum & huius sinum capiendo subtrahatur a sinu toto 10000000 vt constet sagitta ipsius siue sinus versus. Postea per Regulam detri.

Sinus totus
10000000

facit
2 55 50

quid sinus versus vel sagitta
&c

Nota. Omnes præcedentes altitudines per Quadr. Volubilem factæ, tam hoc anno quam præcedente ab eo tempore, quo non tam in sublimioribus, quam declinioribus altitudinibus, cum murali bene consentit, non sunt satis exactæ, ideo illis minus fidendum, sed post hæc verificabatur appposito superis cilindro.

DIE 14 JANUARIJ, MANE.

Post verificatum Quadrantem volubilem.

Sinister humerus Bootis
in mer. 74 14⁵/₆
Dexter hum. Persei vers. sept. 17 47
Luc. □ vrsæ min. alt. max. 70 5¹/₂
Luc. lateris Persei alt. min. 14 17²/₅
H. 7 26'37" Spica occ. 33 33,
alt. lucidæ Coronæ 62 16¹/₆
7 31 0 Spica occ. 34 40¹/₂, alt.
min. minoris in □ vrsæ
min. 72 37³/₄

Post Armillas in Polo melius fixatas.

Lucid. □ vrsæ min. in alt. max., declinatio per Armillas vno 75 48³/₄
alt. pinnac. 75 49

Decl. alterius minus luc.,
vtroq. 73 17¹/₂
Decl. luc. lateris Persei vno 48 23
in min. alt. alt. 48 22⁵/₆
Differt a maxima declinatione 3 min.

EODEM DIE VESPERI.

Oculus ☿ or. 23 59, dext. humerus
Persei alt. mer. 85 55
Inferior cap. Medusæ in mer. 71 17
Oculus ☿ or. 22 59³/₄, alt. mer.
capitis Medusæ 73 24¹/₆

Oculus ☿ or. 20 6¹/₂ transiit
lucida □ vrsæ min. per mer.
habens alt. per Volub. 41 46¹/₂
dubia

Oculus ☿ or. 19 0¹/₂ transiit
lucida lateris Persei per
merid. in alt. per Volub. 82 25³/₄
dubia

Est itaque differentia transitus in æquatore 1° 6'. Cumque hæ duæ stellæ meridianum fere simul transeant, potest ex vtriusque alt. & distantia fieri periculum instrumentorum.

Oculus ☿ or. 12 52 altera minus lucida
in merid. habuit alt. min. 39 14¹/₄
Declin. huius minus 73 20
lucidæ 73 20¹/₄
Lucidioris in □ vrsæ 75 51
minoris 75 51¹/₄
Decl. lucidæ Persej, vtroque 48 19
cum a meridie ad occasum esset,
ergo Armillæ se bene habent.

H. 3 49'55" Schedir Cassiopeæ
alt. minima 20 13
3 55 45 Stellæ Polaris
alt. mer. min. 52 59⁵/₆
4 5 5 Flexuræ Cass.
alt. min. 24 24¹/₂

Sura Bootis in merid. per Vol. 54 37³/₄
Declin. luc. in □ vrsæ 75 49¹/₂
minoris 75 49
Declin. alterius minus 73 17¹/₂
lucidæ 73 17¹/₄

cum essent supra Polum.

Alt. max. luc. in □ vrsæ min. 70 5³/₄
incerta propter nubes.

Nota. Omnes hæ altitudines per Volub. deprehenduntur iusto maiores 1¹/₄ M., quod post diem 20 Januarij, appposito nouo Cilindro, est rectificatum.

DIE 15 JANUARIJ.

Alt. Lyræ min. per Volub. 4 33½

DIE 20 JANUARIJ.

Superioris pedis Ericht.

alt. mer. 66 31

Hædorum lucidior in merid. 74 39½

Obferuabatur distantia inter lucidam

Perfej & lucidam in □ vrfæ 55 50½

min. propter altitudines, 55 50½

inter rariufculas nubes 55 50½

N. B. Omnes altitudines fequentes
poft 20 Januarij diem funt exactiores
per Volub. ob Cilindrum ej rectifica-
tum appofitum, adhibito tamen mu-
rali in confilium.

Inter Capellam & I 34 19

inferius caput II 34 18½

III 34 18½

DIE 26 JANUARIJ, MANE.

2^H26'47'' Quando cor ♀ abfuit a merid.
occ. 30 10½, tranfuit lucida Cathe-
dræ Caßiop. mer. in alt. 22 48

2 48 55 Cor ♀ occ. 35 46, tranfuit vn-
decima Caßiop. per mer. in alt.
26 33½

2 53 25 Cor ♀ occ. 36 58, alt. capitis Caß.
per merid. tranfeuntis 17 33½

2 56 29 Cor ♀ occ. 37 46, quando Sched-
dir Caßiop. tranfuit mer. in alt.
20 11

3 3 51 Cor ♀ occ. 39 31½, fuit ftella Po-
laris in merid. & habuit alt. 52 58½

Nota. Aliquid in perpendicularo defi-
derabatur cum ftella polaris tranfaret,
quod poftea ante tranfitum Spicæ ♄
corrigebatur.

3 11 23 Cor ♀ occ. 41 25, Flexura Caß.
tranfuit merid. in alt. 24 23½

3 57 53 Cor ♀ occ. 48 12½, Genu Caßiop.
per merid. in alt. min. 23 59½

4 3 37 Cor ♀ occ. 54 39½, Luc. pes Caß.
per merid. in alt. min. 27 30½

4 10 30 Cor ♀ occ. 56 24, Extrema cau-
dæ vrfæ maior. in alt. max.
85 29½

4 14 16 Cor ♀ occ. 57 20, Sura Bootis
per mer. in alt. per Volub. 54 36

4 35 34 Cor ♀ occ. 62 47½, tranfuit
Arcturus per merid. in alt.

per Volub. 55 28½

Genu finiftri Bootis alt. mer. 49 39½

dubia

Infimæ fin. pedis Bootis alt. mer.

37 48

5 19 40 Cap. Medusæ alt. min. 5 21¾

Lucidæ lateris Perfej alt. min. 14 16

Luc. baculi Bootis alt. mer. 68 59½

Declin. lucidæ in □ 75 49½

vrfæ min. 75 49½

Præcedentis in Corona alt. mer.

64 20

Declin. alterius minus 73 16

lucidæ in □ vrfæ 73 16½

H. 5 29'57'' Spica ♄ occ. 27 11, Lucida
in □ vrfæ min. per merid. in alt.
max. 70 4

5 55 20 Spica ♄ occ. 33 38½, Lucida
Coronæ per merid. in alt. 62 15½

5 58 39 Spica ♄ occ. 34 26, Sequens
minus lucida in □ vrfæ min. in
alt. max. 72 35½

72 35 50

62 15 20

134 51 10

[Refp. distantia] 45 8 50

Lucida Coronæ & fequens minus luc.
vrfæ min. tranfierunt fimul meridia-
num. Sic etiam lucida Perfei & lucidior
□ vrfæ minoris meridiem fimul tran-
feunt.

EODEM DIE 26 JAN., VESPERI.

H. 5 40'25'' Oculus ♄ or. 18 49½, Lucida
Perfei per merid. in alt. max.
82 23½

dubia

Poftea lucidior in □ vrfæ min.

in altit. min. 41 45½

Alt. eiusdem max. eft 70 4

Ergo vera poli altitudo 55 54 45

H. 6 5' Tranfuit altera minus lucida
in □ vrfæ min. per merid. cum
abeßet oculus ♄ a meridiæ or.

12 51, in alt. min. 39 13½

Quartæ Draconis alt. infra

Polum 26 22

Inter luc. Perfei & 55 50 $\frac{1}{3}$
 luc. in \square vrfæ 55 50 $\frac{1}{2}$
 minoris 55 50 $\frac{1}{2}$

Hæ obseruationes ter repetebantur
 vt exacte constarent, siquidem poßunt
 examinari Quadrantis obseruationes,
 nam hæ duæ stellæ meridianum fere
 simul transeunt.

DIE 27 JANUARIJ.

H. 5 37 $\frac{5}{8}$ Oculus γ or. 18 58 $\frac{1}{4}$, Lucida
 Perfei per Mer. in alt. 28 24 $\frac{1}{8}$ vel 5".

Altera videbatur quæ est Lucida in Vr-
 fa maiore habere Alt. min. 41 46,
 sed erat paulo ultra Meridianum,
 ideoque minor erat altitudo, cuius
 potes ex Azimutho facere indaga-
 tionem.

H. 5 54 $\frac{1}{4}$ Fuit oculus γ or. 14 46 $\frac{1}{4}$, Luci-
 dioris prædictæ Azim. a Sept. ad
 ortum 1 45, Alt. 41 48 $\frac{1}{2}$

H. 6 2 $\frac{1}{2}$ Transiuit altera in \square Vrfæ
 minus lucida per Merid., habu-
 itque Alt. 39 13 $\frac{1}{4}$. Distabat tunc
 Oculus γ a Merid. or. 12 49.

6 6 $\frac{5}{8}$ Luc. Vrfæ min. Az. 2 44. Alt.
 41 51 $\frac{1}{2}$, fuit tunc Oculus γ a Mer.
 11 38 $\frac{1}{2}$.

8 10 43 Lucida \vee occ. 56 28, Alt. luc.
 hum. Erichtonij 78 52 $\frac{2}{3}$
 Altit. alterius humeri Ericht. minus
 lucidi 71 10 $\frac{1}{3}$

Stellæ Polaris alt. min. 52 58 55
 bona

Flexuræ Caßiopeæ alt. min. 24 23 45

Dist. inter Lucidam I 45 8 $\frac{1}{2}$

Coronæ & sequentem II 45 8 $\frac{3}{4}$

in \square Vrfæ min. III 45 8 $\frac{1}{2}$

minus lucid. IIII 45 8 $\frac{1}{3}$

Hæ duæ stellæ fere simul Merid.
 transeunt.

Alt. mer. min. dext. hum.

Perfei 17 45 $\frac{1}{2}$

Alt. min. Capitis Medusæ 5 21 $\frac{1}{2}$

Spica \mathfrak{M} a Merid. occ. 27 23 $\frac{1}{2}$, Lucidæ

in \square Vrfæ min. Alt. min. 70 3 55

Eratque tunc Asc. R. M. C. 123 8

Lucidæ lateris Perfei Alt.

min. 14 16

Spica \mathfrak{M} occ. 33 36, Lucidæ

Coronæ alt. mer. 62 15 $\frac{1}{4}$

Spica occ. 34 45, sequentis

in \square Vrfæ alt. max. 72 36

Stellæ Polaris alt. min. 52 58 55

Alt. Poli 55 54 45

Lucidæ \square Vrfæ min. alt. max. 70 3 55

Alt. min. est 41 45 40,

Alt. Poli 55 54 47

DIE 29 JANUARIJ, MANE.

Altitudo Stellæ Polaris minima per Volub. 52 59

per Sext. nouum 52 59 $\frac{1}{3}$

Flexuræ Caßiopeæ Alt. merid. per Volub. 24 23 $\frac{2}{3}$

per Sext. nouum 24 23 $\frac{3}{4}$

Arcturus in Meridiano habuit Alt. 55 28 $\frac{1}{3}$

Inter Lucidam Coronæ & sequentem in \square vrfæ I 45 8 $\frac{2}{3}$

minoris minus lucidam II 45 8 $\frac{2}{3}$

III 45 8 $\frac{2}{3}$

H. M. S. Spica \mathfrak{M} occ.

27 29 Luc. in \square vrfæ min. alt. max. 70 3 55

Luc. lateris Perfei alt. min. 14 16 $\frac{1}{2}$

5 54 34 33 36 Lucida Coronæ 62 15 $\frac{1}{8}$

5 59 20 34 45 $\frac{3}{4}$ Sequentis in \square vrfæ alt. max. 72 36

Luc. Coronæ 62 15 10

Sequens in \square vrfæ 72 36 0

134 51 10

45 8 50

Hæc distantia per meridianum
 paulo maior est ea quæ per Sextan-
 tem capiebatur, idque in 10", cum
 potius totidem minor esse deberet.

N. B. Altitudo stellæ Polaris hoc anno minima 52° 58' 55"

Cui si addemus eius a Polo distantiam quæ est 2 55 50

Altitudo Poli tunc 55 54 45

Verum quia fieri potest, vt remotio eius a Polo nunc sit paulo minor, vtpote 2° 55' 45" vix transcendat, minor enim esse nequit, erit Poli exacta Altitudo 55° 54' 40".

Lucidæ in quadrato vrfæ min. alt. maxima 70 3 55

minima 41 45 30

28 18 25

14 9 12

Hinc prouenit Alt. Poli 55 54 42

Alteræ minus lucidæ in □ vrfæ alt. maxima 72 36 0

minima 39 13 15

33 22 45

16 41 23

Hinc prouenit Alt. Poli 55 54 38

N. B. De Poli altitudine.

Altitudo Poli hoc anno est ex Polari stella, limitando vtriusque

diff. a Polo 55 54 43

Altit. e lucida □ vrfæ minoris est 55 54 42

Altit. vero e minus lucida □ vrfæ est 55 54 38

Quapropter veritati proxime egerimus constituendo poli altitudinem huius loci exacte 55° 54' 40".

Altitudines vero per Quadrantem acceptas fuisse exquisitas hinc patet, quod lucida Perfei habuerit alt.

82 24 10

lucida in □ vrfæ min. 41 45 30

Summa vtriusque 124 9 40

cuius differentia ad semicirculum 55 50 20

Cum itaque hæ duæ stellæ fere simul meridianum transeant, ita vt differentia numeris non multo 10" sit minor distantia stellarum, cumque distantia per Sextantem sit 55° 50' 30", patet eum se bene habere.

DIE 30 JANUARIJ.

Pro refractione stellarum indaganda ex vtraque altitudine meridiana versus austrum et boream post exactam quadrantis verificationem.

Dextri humeri Perfei Alt. maxima

85° 54' 20"

34 5 20

Decl. in min. alt. 51° 50' 50"

Decl. B. 51 49 0

in max. alt. 51 49 0

Alt. Poli 55 54 40

Alt. minima 17 45 30

38 9 10

Refraction in alt. 17 $\frac{1}{2}$ 1 50

Declin. infra Polum 51 50 50

Lucidæ lateris Perfei Alt. maxima

82 24 10

34 5 20

Decl. in max. alt. 48 18 50

48 18 50

in min. alt. 48 21 20

Alt. minima 55 54 40

14 16 0

Refraction in alt. 14° 16' 2 30

Declin. infra Polum 48 21 20

| | | |
|--|----------|------------------------------|
| Capitis Medusæ alt. maxima | | 73 22 50 |
| | | 34 5 20 |
| Decl. in max. alt. | 39 17 30 | 39 17 30 |
| | | 55 54 40 |
| in min. alt. | 39 26 50 | Alt. minima 5 21 30 |
| | | 50 33 10 |
| Ergo alt. $5\frac{1}{8}^{\circ}$ dat refr. | 9 20 | Declin. infra Polum 39 26 50 |

| Altitudo | Refractio |
|-----------------------------|-----------|
| $17^{\circ} 45\frac{1}{2}'$ | $1' 50''$ |
| 14 16 | 2 30 |
| $5 21\frac{1}{2}$ | 9 20 |

Pro refractione altitudinis stellarum versus boream ¹.

| | Altitudo maxima meridiana | Altitudo infra polum minima | |
|---|---|--|--|
| Dexter hum. Perfei Alt. æquat. Declin. vera Declin. infra Polum Refractio in Alt. $17\frac{3}{4}$ | $85^{\circ} 54' 30''$ 34 5 15 51 49 15 51 50 45 1' 30'' | $17^{\circ} 45' 30''$ 55 54 45 38 9 15 90 51 50 45 | Alt. Poli Decl. infra Polum |
| Lucida lateris Perfei Declin. vera Refractio in Alt. $14\frac{1}{4}$ | 82 24 0 48 18 45 2 30 | 14 16 0 41 38 45 48 21 15 | Decl. infra Polum |
| Caput Medusæ Decl. supra Polum Refract. in Alt. $5\frac{1}{8}$ | 73 23 39 17 45 9 0 | 5 21 30 50 33 15 39 26 45 | Decl. infra Polum |
| Lyræ lucida Decl. supra Polum Refract. in alt. $4\frac{1}{2}$ | 72 33 38 27 45 10 30 | 4 33 51 21 45 38 38 15 | Decl. infra Polum |

| Altitudo | Refract. Altitud. |
|-----------------------------|-------------------------|
| $17^{\circ} 45\frac{1}{2}'$ | $1^{\circ} 30''$ |
| 14 16 | 2 30 |
| $5 21\frac{1}{2}$ | 9 0 |
| 4 33 | 10 30 bona, repetita |

*Nota. Deficiunt a solari refractione
quasi 4 minuta vbique.*

*Ex altitudine minima Caudæ Cygni Anno 1591 p. 9 $50\frac{3}{4}$ et declinatione
eius vera inueni refractionem in altitudine 10° ferme quasi $3\frac{1}{4}$ minutorum.
Sed dubia.*

¹ Cod. Vindob. 10688, 18, fol. 1 r.

DIE 5 FEBRUARIJ.

| | |
|----------------------------------|---------------------|
| Alt. Mer. finift. Cubitus Aurigæ | |
| per Q. Volub. | 77 11 $\frac{1}{2}$ |
| Hædorum sequens in Mer. | |
| per Volub. | 74 38 |
| Capella per Q. Volub. | 79 33 $\frac{1}{4}$ |
| Superior pes Erichton. | |
| per Tych. | 66 30 $\frac{3}{8}$ |

DIE 23 FEBRUARIJ.

| | |
|--|---------------------|
| Capitis Caſiop. Alt. min. | 17 33 |
| Quando cor Ω diſtabat a Merid. occ. | |
| 37 57 $\frac{1}{4}$, fuit Schedir in Merid. & | |
| habuit Alt. | 20 11 $\frac{1}{8}$ |
| Stellæ Polaris Alt. min. | 52 59 |
| Cor Ω occ. 41 41, Flexura in Merid. | |
| | 24 23 $\frac{1}{2}$ |
| Cor Ω occ. 48 24 $\frac{1}{2}$, Genu Caſiop. | |
| Alt. mer. | 23 59 $\frac{1}{2}$ |
| Diſt. inter Luc. Coronæ | 19 26 $\frac{1}{8}$ |
| & Arcturum | 19 26 $\frac{1}{8}$ |
| Hinc Differ. Aſc. R. | 20 6 3 |
| Inter Lucidam Coronæ | 31 30 $\frac{1}{4}$ |
| & Caput Ophiuchi | 31 30 $\frac{1}{4}$ |
| Hinc differ. Aſc. R. | 29 37 45 |
| Inter Lyram & caput | 29 33 |
| Ophiuchi | 29 32 $\frac{3}{4}$ |
| Hinc Differ. Aſc. R. | 16 47 13 |
| Inter Lyram & caudam | 23 52 |
| Cygni | 23 52 |
| Inter Luc. Vult. & extrem. | 28 47 |
| dext. alæ Cygni | 28 47 |
| Inter Luc. Vulturis & | 19 40 $\frac{1}{2}$ |
| Roſtrum Cygni | 19 40 $\frac{1}{2}$ |
| Declin. extremæ alæ Cygni | 28 33 |
| Eadem repetita | 28 33 |
| Declinatio Roſtri Cygni | 27 9 |
| | 27 9 |
| Declin. Lucidæ Lyræ | 38 25 |

Hæc repetatur

DIE 2 MARTIJ.

| | |
|---------------------------|-----------------------|
| Declin. extremæ alæ Cygni | 28 34 $\frac{5}{6}$ |
| Repetita | 28 35 |
| Declinatio Roſtri Cygni | I 27 8 $\frac{3}{4}$ |
| | II 27 8 $\frac{1}{2}$ |

DIE 5 MARTIJ.

| | |
|---------------------------------|---------------------|
| Declinatio Lucidæ Lyræ | 38 27 |
| Inter caput Ophiuchi | 33 42 $\frac{1}{2}$ |
| & caput Cygni | 33 43 |
| Nefcio an hæc ſe recte habeant. | |

DIE 5 APRILIS, MANE.

| | |
|-------------------------|--------------------------|
| Declin. ſtellulæ | 3 37 |
| in cap. Equiculi | 3 36 $\frac{3}{4}$ |
| Diſt. inter os Equiculi | I 20 45 |
| & Vulturem | II 20 43 |
| | III 20 44 |
| | IIII 20 44 $\frac{1}{2}$ |
| | V 20 45 |

| | |
|---------------------------|---------------------|
| Inter Vulturem & | |
| extrem. finift. alæ Cygni | 28 45 $\frac{1}{2}$ |
| | 28 46 |

| | |
|------------------------|------|
| Inter caput Ophiuchi & | |
| roſtrum Cygni | 31 5 |
| | 31 4 |

| | |
|-------------------------------|---------------------|
| Declin. roſtri Cygni | 27 9 B. |
| Declin. extr. dext. alæ Cygni | 28 34 $\frac{1}{2}$ |
| Declin. Lucidæ Lyræ | 38 26 |
| Declin. caudæ Cygni | 43 51 $\frac{1}{2}$ |
| Declin. Lucidæ Vulturis | 7 52 $\frac{1}{2}$ |
| pro ſitu instrumenti. | |

DIE 6 APRILIS.

Per Armillas ſubterr.

| | |
|----------------------------|-----------------------|
| Decl. capitis Equiculi | 3 39 $\frac{1}{2}$ B. |
| Decl. ſeq. in ore Equiculi | 8 34 |
| Repetita | 8 33 $\frac{3}{4}$ |

Per Q. Volubilem

| | |
|-------------------------|---------------------|
| Cap. Ophiuchi Alt. Mer. | 47 2 $\frac{1}{2}$ |
| Super. in dext. hum. | |
| Ophiuchi | 38 55 $\frac{1}{2}$ |
| Australior in eodem | |
| hum. Oph. | 37 3 |

Per Armillas

| | |
|------------------------|-------|
| Declinatio Caudæ Cygni | 43 51 |
| Declinatio Lucidæ Lyræ | 38 26 |

DIE 10 APRILIS, MANE.

| | |
|-----------------------------|--------------------------|
| Declin. præced. | |
| in pectore Pegafi | 21 25 $\frac{1}{4}$ |
| Decl. ſequent. | |
| in pectore Pegafi | 22 30 |
| Diſt. inter ſeq. in pectore | |
| Pegafi & Aquilam | 45 30 $\frac{3}{4}$ ter |
| Inter præced. pectoris | |
| Pegafi & Aquilam | 44 28 |
| Inter caput Cygni & | I 33 47 |
| caput Ophiuchi | II 33 45 |
| | III 33 46 |
| | IIII 33 44 $\frac{1}{2}$ |
| | V 33 45 |

Declin. cap. Cygni 29 17
 Repetita 29 16

DIE 11 APRILIS, MANE.

Inter præcedentem I 44 29 $\frac{1}{2}$
 pectoris Pegasi II 44 30
 & Vulturem III 44 31
 IIII 44 31 $\frac{5}{10}$
 V 44 30 $\frac{1}{4}$

Decl. eiusdem in pectore I 21 27
 II 21 29
 III 21 27

Inter caput Ophiuchi bonæ
 & caudam Cygni 51 12 $\frac{1}{4}$ bis

DIE 28 APRILIS, MANE.

Inter vtramque stellam in I 1 15 $\frac{1}{4}$
 pectore Pegasi II 1 16
 III 1 15 $\frac{1}{2}$
 IIII 1 15 $\frac{3}{8}$

Inter præced. in ore Equiculi
 & Aquilam 19 43
 19 43 $\frac{1}{4}$

Inter sequentem in I 20 44
 ore Equiculi II 20 43
 & Aquilam III 20 44 $\frac{3}{4}$
 IIII 20 44
 V 20 43 $\frac{1}{2}$
 VI 20 43

Decl. præced. in ore Equiculi 8 33 $\frac{1}{3}$

Decl. sequent. in ore Equiculi 8 27

Inter caput Equic. & Vult. 21 27
 21 27 $\frac{1}{2}$

Decl. cap. Equiculi B. 3 36 $\frac{2}{3}$

DIE 30 APRILIS, MANE.

Inter caput Cygni & caput Ophiuchi 33 42 $\frac{3}{4}$ bis

Inter præced. in ore Equiculi
 & Vulturem 19 43

Inter seq. in ore Equiculi
 & Vulturem 20 42 $\frac{1}{2}$
 20 43

Inter cap. Equic. & Vult. 21 26 bis

Decl. cap. Equiculi B. 3 37

Decl. præc. in ore Equic. B. 8 34
 seq. in ore Equic. 8 26 $\frac{1}{4}$

Decl. capitis Cygni 29 15 $\frac{1}{2}$

DIE 25 AUGUSTI.

8^H26' 20" Præced. finist. humeri
 Aquilæ, Alt. per Volub. 43 47 $\frac{5}{8}$

8 30 15 Luc. Vult. Alt. mer.
 per Volub. 41 58 $\frac{1}{6}$

Collum Aquilæ in Mer.
 per Vol. 39 33 $\frac{1}{3}$

Decl. dextri cubiti Antinoi B. 2 22 $\frac{1}{2}$

Decl. lateris Antinoi Mer. 2 5
 Repetita 2 5 $\frac{1}{2}$

Decl. informis circa Aquilam
 B. 0 2 $\frac{1}{4}$
 0 2

Genu Antinoi Decl. M. 7 49 $\frac{1}{2}$
 7 49 $\frac{1}{4}$

Primæ Antinoi Decl. B. 3 55
 3 55 $\frac{1}{4}$

Decl. capitis Cygni 29 15 $\frac{3}{8}$

Decl. Lucidæ Lyræ 38 27

Decl. præc. in ore Equiculi 8 23 $\frac{1}{4}$
 8 23

Seq. in ore Equiculi B. 8 25
 8 25 $\frac{1}{6}$

Præced. in cap. Equiculi 3 37
 3 37 $\frac{1}{2}$

Sequentis in capite 5 7
 5 7 $\frac{1}{4}$

DIE 28 AUGUSTI.

Inter 1 Alæ Peg. & 53 57
 latus Antinoi 53 57 $\frac{1}{3}$

Inter Genu Antinoi & 36 5 $\frac{3}{4}$
 caput Ophiuchi 36 5 $\frac{1}{2}$

DIE 29 AUGUSTI.

Inter Genu Antin. & 36 6
 cap. Ophiu. 36 5 $\frac{1}{4}$

Præced. Oris Equiculi Alt. mer.
 p. Sext. nou. 42 38
 p. Sext. vet. 42 37 $\frac{2}{3}$

Præced. cap. Equiculi Alt. mer.
 per Sex. nou. 37 43
 per Sext. vet. 37 43 $\frac{1}{5}$

per Q. minim. 37 43

Sequens cap. Equic. in Merid.
 per Sext. nou. 39 13
 per Sext. vet. 39 12 $\frac{1}{8}$

per Q. minim. 39 13 $\frac{1}{2}$

Os Pegasi in Merid.
 per Sext. nou. 42 9
 per Sext. vet. 42 8 $\frac{1}{2}$

per Q. min. 42 8

Per Armillas Auftrales

| | | |
|-----------------------------|---------|----------------------|
| Diff. Asc. R. Genu Antinoi | I 69 | 23 $\frac{1}{2}$ |
| & extr. alæ Pegasi | II 69 | 23 |
| | III 69 | 23 $\frac{1}{2}$ |
| Diff. Asc. informis circa | I 64 | 59 |
| Aquilam & extremæ | II 65 | 0 |
| alæ Pegasi | III 65 | 0 $\frac{1}{2}$ |
| | IIII 65 | 0 |
| Declin. Genu Antinoi Mer. | 7 | 49 $\frac{1}{2}$ bis |
| Decl. informis illius circa | 9 | 10 |
| Aquil. repetita | M. 9 | 10 |

DIE 1 OCTOBRIS.

| | | |
|----------------------|----|-----------------------|
| Alt. Lucidæ Vulturis | | |
| per Mur. | 41 | 57 $\frac{1}{2}$ vet. |
| | 41 | 57 $\frac{1}{2}$ nou. |
| per Volub. | 41 | 58 |
| per Sext. vet. | 41 | 58 |
| per Q. Min. | 41 | 57 |

DIE 2 OCTOBRIS.

| | | |
|------------------------|----|------------------|
| Alt. Luc. Vult. Merid. | | |
| per Tych. | 41 | 57 $\frac{1}{4}$ |
| per Sext. nou. | 41 | 57 $\frac{1}{2}$ |
| per Sext. vet. | 41 | 57 $\frac{1}{2}$ |

DIE 11 NOUEMBRIS.

Per Sextantem nouum Trig.

| | | |
|-----------------------------------|---------|------------------|
| Inter Vult. & | I 36 | 21 |
| fin. genu Pegasi | II 36 | 20 |
| | III 36 | 21 $\frac{1}{2}$ |
| | IIII 36 | 21 |
| Inter cap. Andromedæ & | I 27 | 12 $\frac{1}{2}$ |
| fin. genu Pegasi | II 27 | 12 |
| | III 27 | 12 |
| Cruris fin. pedis Peg. | | |
| Alt. mer. per Tych. | 57 | 54 $\frac{1}{2}$ |
| Inter cap. Andr. & | 31 | 57 |
| fin. crus Peg. | 31 | 56 $\frac{3}{4}$ |
| | 31 | 57 $\frac{1}{2}$ |
| Inter luc. Vult. & fin. crus Peg. | 31 | 51 ter |
| Inter Vult. & fin. genu Peg. | 36 | 20 $\frac{1}{2}$ |
| | | bis, bona |
| Inter 7 Pegasi vel sequentem | 43 | 20 $\frac{1}{6}$ |
| in collo & lucidam | 43 | 19 $\frac{3}{4}$ |
| Vulturis | 43 | 20 $\frac{1}{2}$ |
| | 43 | 20 $\frac{1}{2}$ |

| | | |
|------------------------------|----|---------------------|
| Inter extremam alæ | 21 | 12 |
| Pegasi & sequentem | 21 | 12 $\frac{1}{2}$ |
| in collo | 21 | 12 $\frac{1}{2}$ |
| | 21 | 13 |
| | 21 | 12 $\frac{1}{2}$ |
| Decl. sinistri cruris Pegasi | 23 | 49 $\frac{1}{2}$ B. |
| Decl. sinistri genu Peg. | 23 | 22 $\frac{3}{4}$ |
| | 23 | 23 |
| Decl. sequ. in collo Peg. | 10 | 6 |
| | 10 | 5 |

DIE 12 NOUEMBRIS, VESPERI.

| | | |
|----------------------------|----|------------------|
| Sin. genu Pegasi per Tych. | 57 | 29 |
| Inter Luc. V & Scheat | 41 | 19 |
| | 41 | 18 $\frac{1}{2}$ |
| Inter suprem. in manu | | |
| Ophiuchi & Vulturem | 49 | 16 |
| Inter dext. hum. Ophiu. | | |
| & Vult. | 31 | 47 |
| Inter fin. hum. Ophiu. | | |
| & Vult. | 42 | 34 |
| Declin. fin. hum. Ophiu. | 31 | 47 |

DIE 15 NOUEMBRIS.

| | | |
|-----------------------------------|--------|----------------------|
| Inter præced. in sinist. | I 29 | 5 $\frac{1}{4}$ |
| humero Aquilæ & | II 29 | 5 $\frac{1}{3}$ |
| os Pegasi | III 29 | 5 |
| Inter eandem in Aq. & | 32 | 11 $\frac{1}{4}$ |
| caput Oph. | 32 | 11 $\frac{1}{2}$ |
| Declin. præced. in sinist. humero | | |
| Aquilæ per Armillas Auf., | | |
| vtrouque | 9 | 43 B. |
| Inter Lyræ & Luc. hum. | | |
| Cephei per Sext. | 33 | 59 $\frac{1}{2}$ bis |
| Inter luc. hum. Cephei & | | |
| Caud. Cyg. per Sext. | 18 | 5 bis |
| Inter Luc. hum. Cephei | | |
| & Scheat Pegasi | 25 | 36 bis |
| Inter Luc. hum. Cephei | | |
| & Luc. Persei | 47 | 50 $\frac{3}{4}$ bis |

DIE 16 NOUEMBRIS.

| | | |
|----------------------------------|----|------------------|
| Inter os Pegasi & 4 Antinoi | 33 | 34 |
| per Sext. vet., non erat | 33 | 36 |
| satis serenum | 33 | 34 |
| Inter seq. cap. Equiculi & Vult. | 22 | 58 $\frac{1}{2}$ |

DIE 17 NOUEMBRIS.

| | | |
|-------------------|----|------------------|
| Inter Os Pegasi & | 33 | 36 |
| 4 Antinoi | 33 | 37 $\frac{1}{2}$ |
| | 33 | 38 |

| | |
|---------------------|------|
| Inter fin. hum. ♀ & | 29 0 |
| 4 Antinoi | 29 1 |
| | 29 0 |

DIE 18 NOUEMBRIS, VESPERI.

| | |
|--------------------------------|--------------------------|
| Inter Vult. & Luc. fin. | |
| hum. Oph. | 42 34 bis |
| Inter eundem hum. & | 26 12 |
| Luc. Coronæ | 26 12 $\frac{1}{4}$ |
| Decl. Luc. in fin. | B. 10 11 $\frac{1}{2}$ |
| hum. Oph. | 10 13 |
| Inter dextrum humerum | 37 55 |
| Ophiuchi & Lucidam | 37 55 $\frac{1}{2}$ |
| Coronæ | 37 54 $\frac{2}{3}$ |
| Inter dext. hum. Oph. & Vult. | 31 47 $\frac{1}{2}$ bis |
| Inter Vult. & fin. hum. | 40 17 $\frac{2}{3}$ |
| Herculis | 40 18 |
| Declinatio finiftri humeri | 25 28 |
| Herculis | Bor. 25 26 $\frac{1}{2}$ |
| Inter latus Antinoi | 33 37 |
| & Os Pegafi | 33 37 $\frac{1}{4}$ |
| Inter 1 alæ Peg. | 53 57 $\frac{1}{2}$ |
| & latus Antinoi | 53 58 |
| Inter Vult. & præced. | 19 44 $\frac{1}{2}$ |
| in ore Equiculi | 19 44 $\frac{3}{4}$ |
| Inter Vult. & sequent. | 20 43 $\frac{1}{2}$ |
| in ore Equiculi | 20 44 $\frac{1}{6}$ |
| Inter Vult. & præc. | 21 26 $\frac{1}{6}$ |
| in cap. Equic. | 21 26 $\frac{1}{2}$ |
| Inter Vult. & seq. | 22 58 $\frac{3}{4}$ |
| cap. Equic. | 22 59 |
| Inter 2 in finift. manu Bootis | 23 2 $\frac{1}{2}$ |
| & Luc. in □ Vrfæ min. | 23 2 $\frac{1}{2}$ |
| | 23 3 |
| Inter 3 finift. manus Bootis & | 22 24 |
| Luc. □ Vrfæ eiusdem | 22 24 $\frac{1}{6}$ |
| Inter 1 finift. manus Bootis | 22 40 |
| & Luc. in □ Vrfæ min. | 22 40 $\frac{1}{4}$ |
| Inter Lynam & præc. | 46 25 $\frac{3}{4}$ |
| in fin. manu Bootis | 46 26 |
| Inter Lynam & mediam | 46 4 $\frac{3}{4}$ |
| finiftræ manus | 46 5 $\frac{1}{4}$ |
| Bootis | 46 5 $\frac{1}{4}$ |
| Inter Lynam & 3 finiftræ | 44 34 $\frac{3}{4}$ |
| manus Bootis | 44 35 $\frac{3}{4}$ |
| | 44 34 $\frac{3}{4}$ |
| Inter Caudam Cygni & | |
| Luc. □ Vrfæ min. | 46 15 bis |
| Inter Lynam & | 43 57 $\frac{1}{3}$ |
| Luc. □ vrf. min. | 43 58 |
| | 43 58 |

DIE 20 NOUEMBRIS.

| | |
|-------------------------------------|-------------------------|
| Inter supremam rhombi | 36 15 $\frac{1}{2}$ |
| Delphini & Lynam | 36 16 |
| Inter Lynam & occidentali- | |
| orem ex duabus medijs | |
| in rhombo | 35 16 bis |
| Inter Lynam & seq. ex medijs | 36 30 $\frac{3}{4}$ |
| in rhombo | 36 30 $\frac{1}{2}$ |
| Inter Lynam & infim. | |
| in rhombo | 35 52 $\frac{5}{6}$ bis |
| Inter inf. Delph. caudæ | |
| prox. & Lyr. | 37 43 $\frac{1}{4}$ bis |
| Inter seq. in rhombo & | |
| os Pegafi | 15 21 bis |
| Inter occidentaliorem ex | |
| duabus medijs in | 16 49 $\frac{3}{4}$ |
| rhombo & os Pegafi | 16 49 $\frac{1}{2}$ |
| Inter seq. ex duabus medijs | |
| in rhombo Delphini & | |
| Os Pegafi | 15 39 $\frac{1}{6}$ bis |
| Inter infimam rhombi & | 16 55 $\frac{3}{4}$ |
| Os Pegafi | 16 56 |
| Inter caudam Delph. & | 17 30 |
| Os Pegafi | 17 29 $\frac{3}{4}$ |
| Decl. super. in rhombo Delph. | 14 43 |
| Decl. præced. ex medijs in | |
| rhombo | 14 33 |
| Sequ. ex medijs in rhombo | 13 39 $\frac{1}{2}$ |
| Infimæ in rhombo declin. | 13 14 |
| Caudæ Delphinis Lucidæ | |
| Decl. | 10 3 $\frac{1}{4}$ |
| Per Armillas Australes, ideoque mi- | |
| nus certæ. | |
| Inter apicem Δ & | 22 45 $\frac{2}{3}$ |
| caput Androm. | 22 45 $\frac{1}{3}$ |
| Inter suprem. Δ & | 26 13 |
| caput Androm. | 26 13 $\frac{1}{4}$ |
| Inter Australiorem ex seq. in | 27 47 |
| Δ & caput Andromedæ | 27 46 $\frac{1}{2}$ |
| Inter Lynam & | 26 10 |
| Borealem in Telo | 26 10 $\frac{1}{6}$ |
| Inter Lynam & | 25 22 |
| mediam Teli | 25 21 $\frac{3}{4}$ |
| Inter Os Pegafi & | 27 12 |
| Borealiorem in Telo | 27 12 $\frac{1}{4}$ |
| Inter Os Pegafi & | 29 34 |
| mediam in Telo | 29 34 $\frac{1}{6}$ |
| Declin. Borealis in | vno 18 28 $\frac{3}{4}$ |
| Telo | alt. 18 30 |

| | |
|---|-----------|
| Declin. mediæ in Telo | 17 41 |
| Inter extr. dext. alæ Cyg. & Os Pegafi | 52 31 bis |
| Inter penult. dext. alæ Cygni & Os Pegafi | 50 0½ bis |
| Inter med. fin. alæ Cygni & Os Pegafi | 27 30 bis |
| Inter extr. dext. alæ Cygni & Scheat | 48 8¾ |
| Inter penult. dextrae alæ Cygni & Scheat | 46 0½ |
| Inter med. fin. alæ Cygn. & Scheat | 29 56½ |
| | 29 56 |

DIE 21 NOUEMBRIS.

| | |
|---|------------|
| Inter supremam in rhombo Delphini & Lyræ | 36 15½ |
| Inter Occid. ex med. in rhombo & Lyræ | 36 15¾ |
| Inter seq. ex med. in rhombo & Lyr. | 36 30½ |
| Inter infimam in rhombo & Lyræ | 35 52¾ |
| Inter infimam caudæ Delph. & Lyr. | 37 43 |
| Inter suprem. in rhombo & Os Peg. | 15 20¾ |
| Inter Occ. ex duabus medijs in rhombo & Os Pegafi | 16 50 |
| Inter Or. ex 2 medijs in rhombo & Os Peg. | 15 41½ |
| Inter inf. in rhombo & Os Peg. | 16 56½ |
| Inter caudam Delph. & Os Peg. | 17 30 |
| Inter superior. in Telo & Os Peg. | 27 12½ |
| Inter med. in Telo & Os Peg. | 29 34 |
| Inter Boreal. in Telo & Lyræ | 26 9¼ bis |
| Inter med. in Telo & Lyræ | 25 21¾ |
| Inter Occ. hum. Herculis & Vulturem | 49 42 |
| Inter fin. hum. Herc. & Vult. | 40 17½ |
| Inter Vult. & brach. siniftri humeri Herculis | 40 18 |
| | 34 48¾ bis |

| | |
|--|------------|
| Inter seq. in corpore Lyræ & Os Pegafi | 44 20 bis |
| Inter Os Pegafi & præced. in corpore Lyræ | 46 17 |
| Inter extrem. dext. alæ Cygni & Scheat | 46 17¼ |
| Inter penult. dext. alæ Cygni & Scheat | 48 8 |
| Inter med. fin. alæ Cyg. & Scheat | 46 0¾ |
| Inter extr. dext. alæ Cyg. & Os Peg. | 29 56¼ |
| Inter penult. dext. alæ Cyg. & Os Peg. | 52 30¾ |
| Inter med. fin. alæ Cyg. & Os Peg. | 50 0½ |
| Inter Scheat & supr. in dextro pede Cygni | 27 30¾ |
| Inter Scheat & informem dextri pedis Cygni | 37 54¾ bis |
| | 37 59 |
| | 37 58¾ |
| Declinationes per Armillas Australes min. | |
| Decl. supremæ in rhombo Delph. | 14 41½ |
| Occid. ex med. duab. rhombi | 14 30 |
| Decl. sequent. ex med. in rhombo | 13 39 |
| Decl. infimæ in rhombo | 13 13½ |
| Lucidæ apud caudam Delphini | 9 58½ |
| Decl. Borealis in Telo | 18 25 |
| Sequ. seu med. in Telo | 17 34½ |
| Decl. sinifst. hum. Herculis | 25 25 |
| Sinifst. brachij Herculis | 28 0½ |
| Sequent. ex duab. infer. in corpore Lyræ | 32 10½ |
| Præced. minus Luc. in corp. Lyr. | 32 55½ |
| Mediæ siniftræ alæ Cygni | 32 26¼ |
| Extremæ alæ dextrae Cygni | 52 39 |
| Penult. dext. alæ Cygni | 50 52 |
| Dift. inter dext. hum. Oph. & Vult. | 31 47 |
| Inter fin. hum. Oph. & Vult. | 42 34 |
| Decl. Luc. fin. hum. Ophiuchi repetita | 10 9 B. |
| | 10 8 |
| N. B. Stellæ erant in decliui Altitudine. | |

DIE 22 NOUEMBRIS.

Declinationes per Armillas Auftrales.

| | | |
|-----------------------------|----|------------------|
| Superioris in rhombo Delph. | 14 | 39 $\frac{1}{2}$ |
| Præced. ex med. in rhombo | 14 | 29 $\frac{1}{3}$ |
| Seq. ex medijs in rhombo | 13 | 36 $\frac{1}{4}$ |
| Infimæ in rhombo Delph. | 13 | 12 |
| Lucidæ caudæ Delphini | 9 | 52 |
| Superioris in Telo | 18 | 23 $\frac{2}{3}$ |
| Mediæ in Telo | 17 | 36 |
| Præced. infer. | | |
| in corpore Lyræ | 32 | 10 |
| Sequent. inferiorum | | |
| in corp. Lyr. | 32 | 55 $\frac{2}{3}$ |
| Mediæ finiftræ alæ Cygni | 32 | 27 $\frac{1}{2}$ |
| Extremæ dext. alæ Cygni | 52 | 37 $\frac{1}{2}$ |
| Sequentis eiusdem alæ | 50 | 54 |
| Superioris in finiftro | | |
| pede Cygni | 46 | 33 |
| Sequentis in eodem pede | 45 | 32 $\frac{3}{4}$ |

DIE 24 NOUEMBRIS.

| | | |
|----------------------------|----|------------------|
| Inter præced. ex duabus | | |
| infer. in corpore Lyræ | | |
| & Os Pegafi | 46 | 17 |
| Inter feq. duarum | | |
| & Os Pegafi | 44 | 20 |
| Inter superiorem in dextro | | |
| pede Cygni & Scheat | 37 | 54 $\frac{3}{4}$ |
| Inter inferiorem in dextro | | |
| pede & Scheat | 37 | 59 |
| Decl. superior. | | |
| in rhombo Delph. | 14 | 44 $\frac{3}{4}$ |
| Mediæ duarum | | |
| in rhombo præc. | 14 | 35 |
| Sequentis duarum rhombi | 13 | 43 |

DIE 28 DECEMBRIS.

| | | |
|----------------------------|----|------------------|
| Alt. min. primæ caudæ | | |
| vrfæ mai. | 24 | 8 |
| Decl. eiusdem per Armillas | 58 | 14 $\frac{1}{2}$ |
| mai. | 58 | 14 |
| Alt. max. Genu Caßiopeæ | 87 | 50 $\frac{1}{2}$ |
| Decl. eiusdem per Armillas | 58 | 2 |
| | 58 | 1 $\frac{1}{2}$ |
| Decl. med. in cauda | 57 | 6 $\frac{1}{2}$ |
| vrfæ mai. | 57 | 7 |
| Eiusdem Alt. min. | 23 | 1 $\frac{1}{2}$ |

| | | |
|------------------------------|----------|---------------------|
| Decl. extremæ | | |
| in cauda vrfæ | 51 | 26 $\frac{1}{2}$ |
| Alt. merid. pedis Caßiop. | 84 | 18 $\frac{1}{4}$ |
| Decl. pedis Caßiopeæ | | |
| per Armill. | vno pin. | 61 34 $\frac{1}{2}$ |
| | alt. | 61 34 $\frac{1}{4}$ |
| Decl. Luc. in cingulo Cephei | 68 | 45 |
| | 68 | 45 $\frac{1}{2}$ |
| Decl. dext. humeri Cephei | 60 | 53 |
| | 60 | 52 $\frac{3}{4}$ |
| Decl. caudæ Cygni | 43 | 51 |
| | 43 | 50 $\frac{3}{8}$ |

Pro fitu instrumenti cum a merid.
ad occ. eßent.

DIE 29 DECEMBRIS, MANE.

Non erat satis ferenum.

| | | |
|---------------------------------------|------|---------------------|
| Alt. ftellæ Polaris min. | 52 | 59 $\frac{3}{8}$ |
| per Vol. | 52 | 59 $\frac{1}{4}$ |
| Primæ in cauda Vrfæ maior. | | |
| Alt. max. | 87 | 41 $\frac{5}{8}$ |
| Decl. eiusdem in max. Alt. | 58 | 11 |
| | 58 | 10 $\frac{1}{2}$ |
| Alt. max. med. in cauda vrfæ | 88 | 49 |
| Decl. eiusdem per Armillas | 57 | 5 |
| Alt. max. extremæ caudæ | | |
| vrfæ | 85 | 28 |
| Decl. eiusdem | vno | 51 23 |
| per Armillas | alt. | 51 22 $\frac{3}{4}$ |
| Decl. Flexuræ Caßiopeæ | 58 | 30 |
| | 58 | 29 $\frac{1}{4}$ |
| Decl. pedis Caßiopeæ | 61 | 37 |
| cum prope Merid. in min. Alt. eßent, | | |
| propter nubes enim in Alt. merid. ob- | | |
| feruari non potuerant. | | |

| | | |
|-------------------------------|----|------------------|
| Decl. Lucidæ apud | 68 | 47 |
| cing. Cephei | 68 | 46 $\frac{1}{2}$ |
| hæc non erat satis confpicua. | | |

| | | |
|-----------------------------|----|----|
| Decl. dext. hum. Cephei | | |
| vtroque | 60 | 53 |
| Declin. caudæ Cygni vtroque | 43 | 51 |

Quia Declinatio humeri Cephei ad
Ortum a Polo obseruata confentit pro-
pmodum cum ea ad Occafum obser-
uata, & fimul declinatio caudæ Cygni
eadem inuenta eft hoc matutino tem-
pore quæ vespertino fuit, Armillas ad
Merid. recte collocatas eße indicat.

| | | |
|---|------------------|---------------------|
| Eodem Die Vesperi | | |
| Alt. Stellæ Polaris max. | 58 | 49 40 |
| Max. | 58 | 49 40 |
| Min. | 52 | 59 40 |
| | 5 | 50 0 |
| | 2 | 55 0 |
| Alt. Poli | 55 | 54 40 |
| Alt. min. primæ in cauda | | |
| vrfæ mai. | 24 | 7 $\frac{5}{8}$ |
| Decl. eiusdem per Armillas | 58 | 14 $\frac{1}{2}$ |
| | 58 | 15 |
| Decl. med. in cauda | 57 | 7 |
| vrfæ mai. | 57 | 6 $\frac{1}{2}$ |
| Alt. max. Genu Caßiop. | 87 | 50 |
| Decl. eiusdem per Armillas | 58 | 2 |
| alt. pinnac. | 58 | 3 |
| Pedis Caßiop. Alt. max. | 84 | 18 $\frac{3}{4}$ |
| Decl. eiusdem per Armillas | 61 | 35 |
| | 61 | 34 $\frac{1}{2}$ |
| Extremæ caudæ vrfæ | 51 | 26 $\frac{1}{2}$ |
| mai. Decl. | 51 | 26 $\frac{1}{4}$ |
| Eiusdem Alt. minima | 17 | 18 |
| incerta propter nubes | | |
| Luc. Cathedræ Caßiop. | 56 | 53 |
| Decl. | 56 | 52 $\frac{3}{4}$ |
| Schedir Caßiop. Decl. | 54 | 16 |
| | 54 | 16 $\frac{1}{2}$ |
| Flexuræ Caßiop. Decl. | | |
| | vtroque | 58 27 $\frac{1}{2}$ |
| per Armillas cum eßent supra verticem. | | |
| Pro Stellis adhibendis ad Mæstlini numeros expendendos. | | |
| In sinistro brachio Cephei | 52 | 43 $\frac{1}{2}$ |
| a capite V | 52 | 43 $\frac{1}{4}$ |
| | 52 | 43 $\frac{2}{3}$ |
| Pone dist. | 43 $\frac{1}{2}$ | |

| | | |
|---|----|----------------------|
| Lucida V & Cing. Androm. | 17 | 23 $\frac{1}{2}$ |
| | 17 | 24 |
| | 17 | 24 |
| Vtere itaque dist. 17 24 exacte | | |
| Ab oculo V ad Cing. Androm. | 49 | 26 $\frac{1}{2}$ |
| | 49 | 26 $\frac{1}{4}$ |
| | 49 | 26 $\frac{3}{8}$ |
| Vtere dist. 26 $\frac{1}{8}$ | | |
| Declin. scapulæ Androm. | 28 | 41 $\frac{1}{2}$ |
| per Armillas maiores, | 28 | 41 $\frac{1}{2}$ |
| experimenti causa ob | 28 | 41 |
| vicinitatem Horizontis. Vera de- | | |
| clinatio est | 28 | 38. |
| Lucida V habuit declin. | 21 | 32 $\frac{1}{2}$ |
| Est ergo refraçtio in declinatione 4 | | |
| Minut. auferenda. | | |
| Inter Cing. Androm. | 44 | 13 |
| & dextrum | 44 | 13 $\frac{1}{6}$ |
| humerum Cephei | 44 | 13 |
| | | bona |
| Inter Suram Caßiop. quæ est | | |
| in medio pedis & fin. | 19 | 14 $\frac{3}{4}$ |
| brach. Cephei | 19 | 14 $\frac{3}{4}$ |
| | | bonæ |
| Inter eandem Suram & alt. hum. dext. | | |
| lucidum Cephei | 29 | 40 $\frac{1}{8}$ bis |
| Atque hinc poterint restitui stellæ in | | |
| humeris Cephei, quibus vsus est Mæst- | | |
| linus in noua stella & cometa anni 77. ¹ | | |
| Inter Cor V & borealiorem in | | |
| sinistro posteriore pede | 31 | 0 |
| vrfæ maioris dist. | 31 | 0 |
| Eadem in pede Vrfæ quæ est | | |
| 20 ^{ma} numero, ab inf. ca- | 33 | 53 $\frac{1}{8}$ |
| pite II | 33 | 53 $\frac{1}{8}$ |
| Hinc poterit stella illa in pede Vrfæ | | |
| maioris verificari, qua vsus est Mæst- | | |
| linus in noua stella anni 72. ² | | |

PRO STELLIS CASSIOPEÆ EXACTE PERUESTIGANDIS³.

DIE 17 FEBRUARIJ.

Vesperi circa H. 7 obseruabantur
stellæ Caßiopeæ a Lucida V hoc modo.
I. Pro examine instrumenti capieba-

tur inter Luc. V & aldeboram 35° 32 $\frac{1}{4}$ ′,
ergo recte se Sextans habuit.

Lucida V & Schedir 36° 38 $\frac{1}{4}$ ′ bis
Lucid. V & Flexura 39 11 bis

¹ Cf. T. IV p. 218 & T. III p. 65.

² Cf. T. III p. 65.

³ Sequentes obseruationes dedimus jam in Tom. X p. 274 et p. 277 seqq. ex Historia Cœlesti. Neque enim nobis tum constabat has obseruationes, a Curtio sine ulla ratione in annum 1583 coniectas, re vera anno 1587 factas esse, ut e codice V manifesto patet.

| | | | |
|--|-----|-----------------|--------------------------|
| Luc. ∇ & Luc. Cathedræ | 41 | $20\frac{3}{4}$ | bis |
| Luc. ∇ & fin. cubitus Caß. | 33 | $19\frac{5}{6}$ | |
| | 33 | $20\frac{1}{4}$ | |
| Pone | 33 | 20 | |
| Luc. ∇ & vndec. Caß. | 42 | 28 | |
| | 42 | 28 | |
| Vtere distantia | 42 | $28\frac{1}{4}$ | |
| | 42 | $28\frac{1}{8}$ | |
| Inter luc. ∇ & latus | I | 30 | $22\frac{1}{4}$ |
| Perfei | II | 30 | $22\frac{1}{8}$ |
| | III | 30 | $22\frac{1}{2}$ |
| Potes vti distantia $30^{\circ} 22\frac{1}{2}'$ si forte aliquam refractionem fecit Caput ∇ . Fuit autem Altitudo Luc. ∇ circa vltimam obseruationem 26 Part. ideo nullam sensibilem ingerebat refractionem. | | | |
| Luc. ∇ & Caput Caßiop. | 34 | $46\frac{3}{4}$ | |
| Vtere tutius | 34 | $47\frac{1}{2}$ | II |
| | 34 | 48 | III |
| | 34 | $47\frac{1}{2}$ | IIII |
| Luc. ∇ & cingulum Caß. | 37 | 12 | bis |
| Oculus γ & Genu Caß. | 55 | $23\frac{1}{2}$ | ter |
| Luc. ∇ & Genu Caß. | 37 | 27 | bis |
| | 37 | $26\frac{1}{2}$ | femel |
| Inter Aldeb. & | I | 36 | $18\frac{1}{2}$ |
| lucid. Perfei | II | 36 | 19 |
| Pone hanc dist. | 36 | 19 | III |
| & insensibiliter | IV | 36 | $19\frac{1}{4}$ |
| aberrabis | | | |
| Sequenti Vesperi rursus obseruabantur Stellæ Caßiopeæ & primo experiebatur Sextans in luc. ∇ & Aldeb. dabatque eorum dist. 35 $32\frac{1}{4}$. Ergo Sextans bene se habuit. | | | |
| Inter luc. ∇ & luc. Perfei | I | 30 | $22\frac{3}{4}$ bis |
| Alt. luc. ∇ 35 Gr. | II | 30 | $22\frac{5}{6}$ |
| Potes vti distantia veriori 30 23, nam quod heri vesperi dabat dimidio scrupulo minus effecit refractione, quia erat decliuior. | | | |
| Lucida ∇ & Sura Caß. | I | 40 | $13\frac{2}{3}$ |
| | II | 40 | $13\frac{2}{3}$ vt prius |
| Luc. ∇ & Planta Pedis Caß. | 44 | $2\frac{1}{4}$ | |
| Pone hic | 44 | $2\frac{1}{6}$ | II |
| | 44 | 3 | III |
| | 44 | $2\frac{1}{8}$ | |
| Luc. ∇ & cubitus dext. Caß. | 39 | $56\frac{1}{2}$ | |
| supra fellam proxima | 39 | $56\frac{5}{6}$ | |
| Pone | 39 | $56\frac{1}{2}$ | vel 39 57 |
| Postea animaduertens paruam quandam stellam in capite Caßiopeæ iuxta | | | |

alteram, versum lucidam cathedræ quam crines Caßiopeæ appellare libuit, vel occiput, non enim est in verum catalogo.

Luc. ∇ a crinibus vel occipite Caßiop.

Pone 35 46

Obseruauimus & tres stellas in superiore parte fellæ, quas non annotarunt, a luc. ∇ quarum prima est in dextro brachio eiusque dist. a lucida ∇

41 $31\frac{2}{3}$

41 $32\frac{1}{8}$

Pone dist. 41 32

2^a feu media a lucida ∇

43 3

43 3

Pone dist. 43 3

3^a a lucida ∇

44 44

44 $43\frac{1}{8}$

Pone dist. 44 $43\frac{1}{2}$

Luc. ∇ & scabelli pedis in sede

N. B. Hæ stellæ ita prima 45 $10\frac{1}{2}$ bis

numerantur, vt prima media 47 23

in scamno seu sede 47 $23\frac{1}{2}$

fellæ sit ea quæ est vltima 48 $53\frac{3}{4}$

plantæ pedis proxima. 48 54

Oculus γ & luc. Perfei 36 $19\frac{1}{6}$

36 19

Potes absque sensibili errore vti distantia 36 $19\frac{1}{6}$

Inter lucid. Perfei &

calcem pedis II 44 $14\frac{1}{4}$

femel

DIE 21 FEBRUARIJ.

Reperiebantur quædam Stellæ Caßiopeæ a lucida ∇ . Experimentabatur primo Sextans a lucida ∇ in oculum γ , & inueniebatur distantia 35 $32\frac{1}{6}$

Inter lucidam ∇ & lucidam

Cathedræ 41 $20\frac{3}{4}$ bis

Inter luc. ∇ & Schedir 36 $38\frac{1}{3}$

Caßiopeæ 36 $38\frac{1}{4}$

Inter lucidam ∇ & Flexuram 39 $10\frac{1}{2}$ bis

39 $10\frac{2}{3}$

Quia vero in antecedentibus ponitur 39 $11'$ bis etiam, potes absque sensibili errore vti distantia 39 $10\frac{3}{4}$

Lucida ∇ & XI^a Caßiopeæ 42 $29\frac{1}{2}$

42 $29\frac{3}{4}$

Fuit circa hæc tempora alt. luc. γ
28 Grad.

Lucida γ & XI^a Ca β iopeæ 42 29
bona, vtere hac.

Lucida γ & intermedia fedis funda-
mento & XI^{mæ} quæ est parua ad-
modum

I 45 6 $\frac{3}{4}$
II 45 6
III 45 6 $\frac{2}{3}$
Pone 45 6 $\frac{1}{2}$

Lucida γ & II^{da} proxima ad Genu quæ
est sextæ magnitud. I 36 15 $\frac{3}{4}$

II 36 15
III 36 14 $\frac{1}{2}$
Pone 36 15

Inter luc. γ & eam quæ est 9^a Thaddeo
quæ videlicet est intermedia illi
quæ in brachio & quæ in genu,
estque admodum parua Sextæ
magnitudinis 35 44 dubia

II 35 45 $\frac{1}{4}$
III 35 46
IV 35 46 $\frac{1}{2}$
Pone hic 35 46

Lucida γ & paruula in fi-
nistro cubito 33 38 $\frac{2}{3}$

33 37
33 38
Pone hic dist. 33 38

Fuit in his vltimis obseruationibus
altitudo lucidæ Stellæ capitis γ 21 Gr.
prope.

Inter latus Perfei & I 44 14
calcem II 44 13 $\frac{3}{4}$
III 44 14

Pone insenbiliter 44 14

Inter lucidam Perfei & 53 23 bis
inferius II 53 22 $\frac{2}{3}$ bona

Hæ sunt meliores quam illæ quæ
altero vesperi accipiebantur. Oportet
hanc cras repetere & eam quæ est in-
ter inferius II & Aldebora, item inter
Aldebora & calcem II

CAPELLA.

Inter Capellam & 44 6 $\frac{2}{3}$
lucidam γ II 44 6 $\frac{2}{3}$
III 44 6 $\frac{5}{6}$

Vltima erat inter tenuiores nubes. Po-
tes autem vti dist. 44 6 $\frac{1}{4}$

Inter Capellem & Aldeb. I 30 42
II 30 42
III 30 41 $\frac{1}{2}$
IV 30 42
V 30 41 $\frac{3}{4}$

Capella & inferius caput II I 34 19 $\frac{1}{2}$
II 34 19 $\frac{1}{8}$

Sequenti vesperi repetita 44 6 $\frac{2}{3}$ bis
dist. Capellæ & lucidæ γ 44 6 $\frac{1}{2}$
44 6 $\frac{2}{3}$

adhuc bis
Ponatur itaque dist. hæc absque er-
rore P. 44 M. 6 $\frac{2}{3}$

Lucida γ & dext. hum.
Erichtonij 51 21 $\frac{1}{4}$ bis

Capellæ dist. a stellis Ca β iopeæ.

Inter Capellam & caput
Ca β iopeæ I 43 45 $\frac{1}{4}$
II 43 43 $\frac{3}{4}$
III 43 44
vtere dist. 43 44 $\frac{1}{2}$

Capella & parua ad
crines Ca β . I 44 15
II 44 15 $\frac{1}{2}$

Capella et ea quæ
in brachio dextro I 48 9 du-
II 48 9 $\frac{1}{2}$ bia

Sequens earum trium
a Capella I 48 3
II 48 3 $\frac{1}{4}$
III 48 3 $\frac{1}{2}$
vtere 48 3 $\frac{1}{2}$

Tertia earum trium
a Capella I 48 34
II 48 33
III 48 33 $\frac{1}{2}$
vtere 48 33 $\frac{1}{2}$

Capella & cubitus
sinister Ca β . I 38 42 $\frac{1}{4}$
II 38 42 $\frac{1}{2}$

Capella & parua in
brachio sinistro VIII I 39 29 $\frac{1}{4}$
II 39 28 $\frac{1}{2}$
Pone dist. 39 29

Capella & Schedir
Ca β iopeæ I 42 28
II 42 28 $\frac{1}{4}$
III 42 28 $\frac{1}{2}$

Capella & lucida
cathedræ I 45 41 $\frac{1}{4}$
II 45 41 $\frac{3}{4}$

Capella & Flexura I 39 30
II 39 30
III 39 30

| | |
|----------------------------|------------------------|
| Capella & cingulum | I 41 7 |
| Caß. | II 41 $7\frac{2}{3}$ |
| | III 41 8 |
| | IV 41 8 |
| Pone | 41 7 45 |
| Capella & XI ^{ma} | I 41 $53\frac{1}{2}$ |
| Caßiopeæ | II 41 $53\frac{1}{4}$ |
| | III 41 $53\frac{1}{2}$ |

Pro vmbilico Caßiopeæ, vbi sunt duo stellæ paruulæ sextæ magnitud. adeo conjunctæ vt discerni nequeant, harum medium accipies ab XI^a Caß. et luc. Cathedræ, non sunt adhuc in numero cæterarum. Voca autem gyrum vmbilici.

Si vis vtramque harum paruuarum distantiam discernere, pone proximam Cathedræ part. 5.59, remotiû. 6.4, dist. ab XI^{ma} maneat vtrique eadem.

| | |
|--|------------------------|
| XI Caß. & Gyrus vmbilici | I 4 $42\frac{1}{2}$ |
| | II 4 $42\frac{2}{3}$ |
| Gyrus umbil. & luc. | 5 59 |
| Cathedræ | 6 5 |
| Pone | 6 2 |
| Capella & parua proxima | I 35 $0\frac{2}{3}$ |
| Genu numero XVI | II 35 $0\frac{1}{2}$ |
| | III 35 1 |
| Capella & altera apud | I 36 $54\frac{1}{4}$ |
| Genu XV | II 36 $53\frac{3}{4}$ |
| Capella & XVII quæ est in scabello | I 34 42 |
| | II 34 44 |
| | III 34 $44\frac{1}{4}$ |
| Capella & media scabelli | I 36 $15\frac{1}{2}$ |
| | II 36 $15\frac{2}{3}$ |
| Capella & extrema in scabello | I 37 $42\frac{1}{4}$ |
| | II 37 $42\frac{1}{2}$ |
| Capella & XX quæ est media in cathedræ parte inferiori | 37 $29\frac{3}{4}$ |
| | 37 $28\frac{3}{4}$ |
| | 37 $29\frac{1}{4}$ |
| Capella & Genu V ^a | 36 $1\frac{1}{2}$ |
| | 36 $1\frac{1}{2}$ |
| Capella et crus VI | I 32 $46\frac{3}{4}$ |
| | II 32 46 |
| | III 32 $46\frac{1}{2}$ |
| Capella et Planta pedis VII ^a | 30 $18\frac{1}{3}$ |
| | 30 $17\frac{2}{4}$ |
| | 30 18 |

| | |
|---|------------------------|
| Inter Capellam & boreale cornu ♀ | I 17 $30\frac{3}{4}$ |
| | II 17 $31\frac{1}{4}$ |
| | III 17 $31\frac{1}{2}$ |
| | IV 17 $31\frac{1}{2}$ |
| | V 17 $31\frac{2}{3}$ |
| | VI 17 $31\frac{2}{3}$ |
| | VII 17 $31\frac{1}{2}$ |
| Pone distantiam veram Part. | 17 $31\frac{1}{2}$ |
| Inter Aldeboram & boreale cornu ♀ | I 16 42 |
| | II 16 $44\frac{1}{4}$ |
| | III 16 $44\frac{1}{2}$ |
| | IV 16 $44\frac{1}{4}$ |
| | V 16 43 |
| Pone dist. veram | 16 44 |
| Inter Aldeb. & australe cornu ♀ | I 15 18 |
| | II 15 $17\frac{5}{6}$ |
| | III 15 18 |
| Inter Capellam & aust. cornu ♀ | I 25 $15\frac{3}{4}$ |
| | II 25 16 |
| | III 25 16 |
| | IV 25 16 |
| Australe cornu ♀ & inferius caput II | I 29 50 |
| | II 29 $49\frac{5}{6}$ |
| | III 29 $49\frac{5}{6}$ |
| Boreale cornu ♀ & inferius caput II | I 30 35 |
| | II 30 35 |
| | III 30 $35\frac{1}{6}$ |
| Inter Capellam & extremam in summitate fellæ numero XXI | I 50 $34\frac{1}{4}$ |
| | II 50 $33\frac{1}{3}$ |
| | III 50 34 |
| Inter Capellam & paruulam apud flexuram | I 39 54 |
| | II 39 53 |
| | III 39 54 |
| Inter lucidam Cathedræ & Flexuram XII et IV | I 6 $11\frac{3}{4}$ |
| | II 6 $11\frac{1}{2}$ |
| | III 6 $11\frac{2}{3}$ |
| | IV 6 $11\frac{1}{2}$ |
| Inter lucidam Cathedræ & Genu XII et V | I 9 42 |
| | II 9 42 |
| | III 9 $42\frac{1}{3}$ |
| Inter luc. Cathedræ & Schedir XII et II ^a | I 4 57 |
| | II 4 $57\frac{1}{3}$ |
| | III 4 57 |
| Inter luc. Cathedræ & caput XII et I ^a | I 6 $32\frac{1}{3}$ |
| | II 6 $32\frac{1}{2}$ |
| Inter luc. Cathedræ & crines XII et XIV | I 5 49 |
| | II 5 39 |
| Inter luc. cathedræ & dext. Brachium XII et IX | I 9 18 |
| | II 9 17 |
| | III 9 $17\frac{3}{4}$ |

| | |
|--|-------------|
| Inter luc. Cathedræ & Cingulum XII & III | I 5 19½ |
| Inter luc. cathedræ & vmbilicum | II 5 19 |
| Inter luc. Cath. & supremam in Genu scilicet num. XV | 5 59 |
| Inter luc. Cathedræ & Suram VI num. | 5 58½ |
| Inter luc. Cath. & Plan- tam pedis XII & VII | I 9 15½ |
| Lucida Cath. & Extrema scabelli XII & XIX | II 9 15 |
| Lucida Cathedræ & media scabelli XVIII | I 13 18 |
| Luc. Cathedræ infima & I ^a scabelli XVII numero | II 13 18 |
| Lucida Cath. & med. inter XI ^m & I ^{am} in imo sellæ num. XX | I 17 29 |
| Inter vndecimam et luc. Cathedræ | II 17 28½ |
| Inter XI ^{am} & Schedir | I 17 22½ |
| Inter XI & Flexuram | II 17 22½ |
| Inter Schedir & Genu | I 16 27½ |
| Inter Schedir & Flexuram | II 16 27 |
| Inter Flexuram & Genu | I 14 55 |
| Poftea eadem dift. obser- uabatur | II 14 54½ |
| | III 12 16 |
| | 12 16½ |
| | 4 47 |
| | 4 47½ |
| | I 6 26 bona |
| | II 6 24¾ |
| | III 6 24½ |
| | I 3 32½ |
| | II 3 32½ |
| | I 6 57½ |
| | II 6 57½ |
| | I 4 36½ |
| | II 4 37 |
| | III 4 36½ |
| | I 3 34½ |
| | II 3 34½ |
| | 3 36 |

DIE 5 MARTIJ.

| | |
|----------------------------|----------|
| Inter vndecimam & cingulum | 5 24 |
| Inter Schedir & cingulum | 5 23 |
| Inter Schedir & caput | 1 39½ |
| | 1 39½ |
| | I 2 35 |
| | II 2 36 |
| | III 2 35 |

DIE 10 MARTIJ.

| | |
|----------------------------------|--------|
| Inter Capellam & infer. caput II | 34 19½ |
| pro examine Sextantis. | 34 19½ |

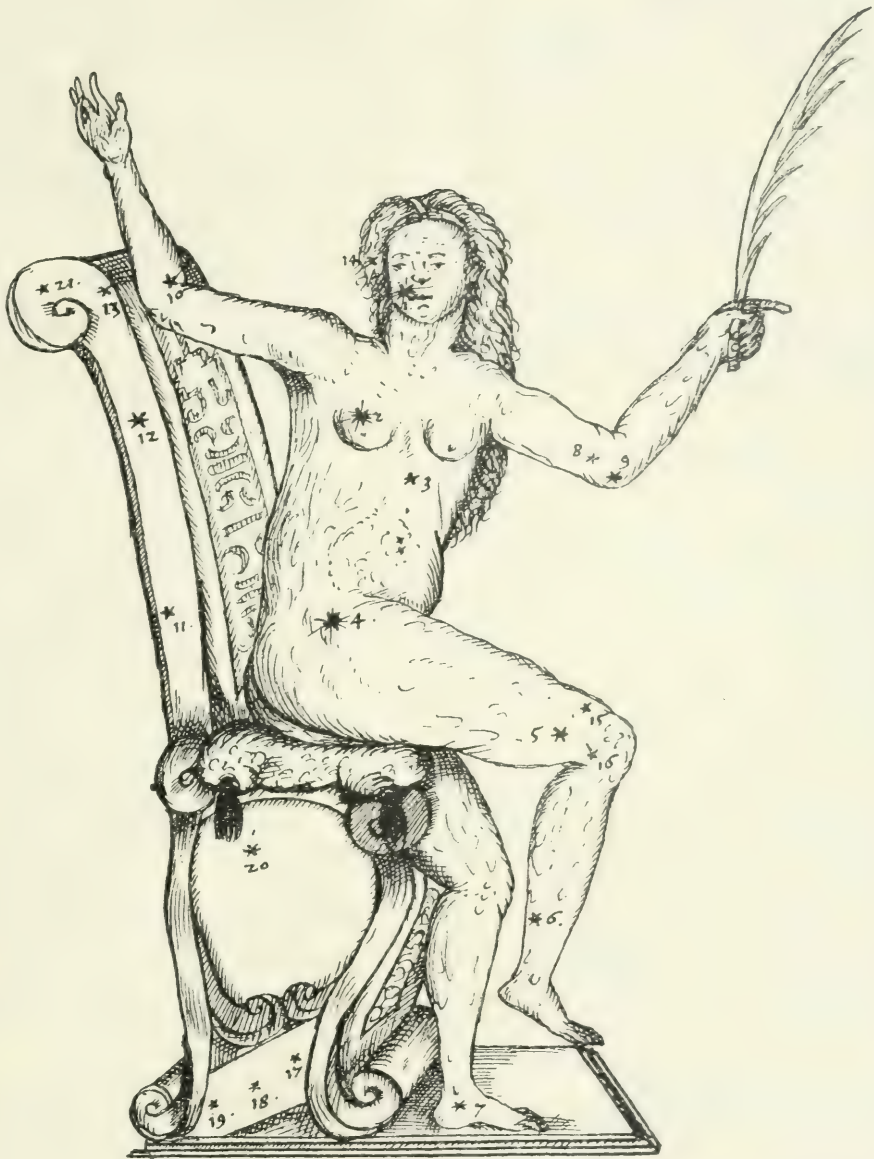
| | |
|--------------------------------|-----------------------|
| Inter luc. Cathedræ & flexuram | 6 12 |
| | 6 12 |
| | 6 12 |
| Inter luc. Cath. & Schedir | 4 59 ^{femel} |

DIE 17 MARTIJ, VESPERI.

| | |
|--|------------|
| Inter Capellam & inferius caput II | 34 19 |
| pro examine Sextantis. | 34 19 |
| Inter lucidam Cathedræ & Flexuram | I 6 11½ |
| | II 6 12 |
| | III 6 11½ |
| Inter lucidam Cathedræ & Schedir | I 4 59½ |
| | II 4 59½ |
| | III 4 59½ |
| Inter Flexuram & Schedir | I 4 37½ |
| | II 4 37½ |
| Inter Schedir & vndecimam | I 4 24 |
| | II 4 24½ |
| | III 4 24 |
| Schedir a luc. Cathedræ per bina centra vnico centro | 4 58½ bis |
| | 4 59 bis |
| | 4 59½ |
| Inter XI ^{am} & Schedir Caßiopeæ | I 6 27 |
| | II 6 26½ |
| | III 6 27½ |
| Inter XI ^{am} & Cingulum Caßiopeæ | I 5 23 |
| | II 5 23½ |
| | III 5 23 |
| Inter XI ^{am} Caßiopeæ & Polarem | I 26 25 |
| | II 26 25¾ |
| | III 26 25 |
| | III 26 25 |
| Inter Flexuram & Polarem | I 28 35½ |
| | II 28 35½ |
| | III 28 35½ |
| Inter Flexuram & crus Caß. | I 7 20 |
| | II 7 20 |
| | III 7 19¾ |
| Inter luc. Cathedræ & Genu | I 9 42½ |
| | II 9 42 |
| | III 9 42½ |

DIE 22 MARTIJ, VESPERI.

| | | |
|-----------------------------------|----------|------------------------|
| Inter lucidam Cathedræ & Flexuram | I 6 11½ | } duobus centris |
| | II 6 11½ | |
| Inter luc. Cathedræ & Schedir | I 4 58½ | } etiam duobus centris |
| | II 4 58½ | |



| | | | | |
|----------------------------------|-----|---|-----------------|-------------------|
| Inter luc. Cathedræ & | I | 9 | $42\frac{1}{4}$ | duobus centris |
| Genu | II | 9 | $42\frac{1}{8}$ | |
| Inter XI ^{am} & Schedir | I | 6 | 26 | |
| Caß. | II | 6 | $25\frac{1}{2}$ | |
| | III | 6 | $25\frac{3}{4}$ | |
| | IV | 6 | 26 | |
| | V | 6 | $25\frac{2}{3}$ | |

DIE 1 APRILIS, VESPERI.

| | | | |
|---------------------------|-----|----|-----------------|
| Inter flexuram & Genu | I | 3 | 36 |
| | II | 3 | $36\frac{1}{6}$ |
| | III | 3 | $35\frac{3}{4}$ |
| Pone vbique | | 3 | 36 |
| Inter flexuram & Polarem | I | 28 | $35\frac{1}{2}$ |
| | II | 28 | $35\frac{1}{6}$ |
| Inter flexuram & cingulum | I | 3 | $2\frac{1}{3}$ |
| | II | 3 | $2\frac{1}{3}$ |
| | III | 3 | $2\frac{1}{2}$ |
| Inter Genu & crus | I | 4 | 50 |
| | II | 4 | 50 |

DIE 29 APRILIS.

| | | | |
|-----------------------------------|-----|---|-----------------|
| Inter XI ^{am} & cingulum | | 5 | 23 |
| CaBiopeæ | | 5 | $22\frac{1}{2}$ |
| | | 5 | 23 |
| Inter XI & Flexuram | I | 3 | 32 |
| | II | 3 | $31\frac{2}{3}$ |
| Inter XI & luc. Cathedræ | I | 4 | 46 |
| | II | 4 | 47 |
| | III | 4 | 46 |
| Inter Schedir & caput | I | 2 | 34 |
| | II | 2 | $33\frac{1}{2}$ |
| Inter luc. Cathedræ & cing. | | 5 | 17 |
| | | | femel |

DIE 10 DECEMBRIS.

| | | |
|------------------------------|-----|-----------------|
| Inter luc. V & Plantam pedis | 44 | $2\frac{1}{2}$ |
| CaBiop. | 44 | $2\frac{2}{3}$ |
| | vel | $2\frac{3}{4}$ |
| Inter luc. V & extrem. | 41 | $30\frac{1}{3}$ |
| fedis CaBiopeæ | 41 | 31 |
| Lucida V & dexter cubitus | 39 | 56 |
| Caß. | 39 | $56\frac{1}{8}$ |
| Luc. V & finifter cubitus | 33 | 22 |
| Caß. | 33 | $21\frac{1}{2}$ |
| Luc. V & paruula in finistro | 33 | $37\frac{3}{4}$ |
| brachio | 33 | 38 |
| Inter Capellam & Extremam | | |
| fellæ | 48 | 3 |

| | | |
|----------------------------|----|----|
| Inter Capellam & dextrum I | 48 | 9½ |
| | | |

DIE 19 DECEMBRIS.

| | | |
|--------------------------------|----|-----------------|
| Inter Capellam & superiorem | | |
| ex duabus paruis in Genu | 34 | 59 |
| Inter Capellam & Præced. | | |
| duarum in Genu | 36 | 56 |
| Inter Capellam & luc. in | | |
| finift. brachio | 38 | $40\frac{3}{4}$ |
| Inter Capellam & alt. minus | | |
| lucidam | 39 | 25 |
| Inter Capellam & XIII Caß. | 48 | $29\frac{1}{2}$ |
| Inter Capellam & | 36 | $14\frac{1}{2}$ |
| mediam scabelli | 36 | $14\frac{1}{2}$ |
| | | dubia |
| Inter Capellam & sequentem | 43 | $2\frac{3}{4}$ |
| duarum boreal. in virga | 43 | 3 |
| Inter Capellam & præced. | 44 | $15\frac{1}{4}$ |
| ex duabus in virga | 44 | 15 |
| Inter Capellam & sequentem | 44 | 43 |
| duarum extremarum in | | |
| virga | 44 | $43\frac{1}{2}$ |
| Inter Capellam & Extremam | 45 | $24\frac{1}{3}$ |
| in virga | 45 | 25 |
| Inter luc. V & paruam in | | |
| recta linea cum XI & | 45 | $5\frac{1}{2}$ |
| media scabelli | 45 | $5\frac{3}{4}$ |
| Inter luc. V & sequentem in | 36 | $14\frac{1}{2}$ |
| genu | 36 | $14\frac{1}{2}$ |
| Inter luc. V & præcedentem | 35 | 47 |
| in genu | 35 | 47 |
| Inter luc. V & luc. in finift. | | |
| brachio | 33 | 22 |
| Inter luc. V & minus lucidam | | |
| eiusdem brach. | 33 | 39 |
| Inter luc. V & paruulam | 43 | $0\frac{1}{2}$ |
| infra extremam fellæ | 43 | 1 |
| Lucid. V & sequens duarum | 31 | 23 |
| boreal. in virga | 31 | 23 |
| Lucid. V & præced. duarum | 31 | $41\frac{1}{4}$ |
| boreal. in virga | 31 | 41 |
| Inter luc. V & superiorem | 29 | $39\frac{1}{2}$ |
| duarum extrem. in virga | 29 | $40\frac{1}{2}$ |
| Inter luc. V & Extremam | 28 | 55 |
| in virga | 28 | $54\frac{1}{2}$ |

Altitudines per Sextantem, mane.
DIE 11 JANUARIJ.

| | |
|------------------------------|---------------------|
| Alt. merid. Schedir | |
| Caſiopeæ | 20 13 $\frac{3}{4}$ |
| Flexuræ | 24 24 $\frac{3}{4}$ |
| Pedis Caſiopeæ | 27 32 $\frac{2}{3}$ |
| Præcedentis in latere Perſei | 17 46 $\frac{1}{4}$ |
| Lucidæ lateris Perſei | 14 17 $\frac{1}{8}$ |

DIE 15 JANUARIJ.

| | |
|-----------------|---------------------|
| Lucida Cathedræ | 22 49 $\frac{1}{2}$ |
| Schedir | 20 14 |
| Flexura | 24 24 $\frac{1}{8}$ |

Altitudines meridianæ
per eundem Sextantem Veſperi.

DIE 9 JANUARIJ.

| | |
|--|---------------------|
| Alt. merid. mediæ in cauda | |
| vrfæ maioris | 22 55 $\frac{1}{8}$ |
| Extremæ in cauda | 17 24 $\frac{3}{4}$ |
| Lucida in \square^{to} vrfæ minoris | 41 45 |
| Sequentis in \square^{to} eiusdem | 39 14 |
| Lucida Lyræ in alt. minima | 4 39 $\frac{1}{2}$ |
| Alt. Extremæ Cathedræ | 22 49 $\frac{1}{4}$ |
| Schedir Caſiopeæ | 20 12 $\frac{1}{8}$ |
| | incerta |
| Flexura | 24 25 $\frac{1}{8}$ |
| Genu Caſiop. | 24 0 |

incertæ propter nubes.

Pedem Caſiopeæ in Meridie propter
nubes obſervare non licuit.

DIE 14 JANUARIJ.

| | |
|--|---------------------|
| Lucida in \square^{to} | |
| vrfæ minoris | 41 45 |
| ſequens inferioris \square^{ti} | 39 13 $\frac{3}{4}$ |

DIE 1 JANUARIJ.

[Per Tychon.].

| | |
|----------------------|--------------------------|
| Altitudo præcedentis | 54 36 $\frac{1}{8}$ vet. |
| in Arcturo | 54 36 nouo |

| | |
|-------------------------|--------------------------|
| Altitudo Arcturi merid. | 55 28 vet. |
| | 55 27 $\frac{3}{4}$ nouo |

Per Tychonicum

DIE 9 JANUARIJ.

| | |
|-----------------------|--------------------------|
| Sura Bootis in merid. | 54 36 vet. |
| | 54 35 $\frac{5}{8}$ nouo |
| | pin. |
| Alt. merid. Arcturi | 55 28 vtroq. |
| | pin. |

DIE 15 JANUARIJ.

| | |
|-----------------------------|---------------------|
| Arcturus per merid. in alt. | 55 27 $\frac{1}{2}$ |
|-----------------------------|---------------------|

DIE 15 DECEMBRIS.

| | |
|-----------------------|--------------------------|
| Altitudo merid. | |
| capitis Andromedæ | 60 55 vtroq. |
| Alt. merid. extr. alæ | 46 59 $\frac{1}{2}$ vet. |
| Pegaſi | 46 59 $\frac{1}{4}$ nouo |

DIE 16 DECEMBRIS.

| | |
|------------------------|--------------------------|
| Alt. ſcheat Pegaſi | 59 58 in- |
| | certa propter nubes |
| Capitis Androm. | 60 55 vtroq. |
| Extremæ alæ Pegaſi | 46 59 $\frac{3}{8}$ vet. |
| | 46 59 $\frac{1}{2}$ nouo |
| Mediæ finiſtræ ſcapulæ | 62 42 vet. |
| Andromedæ | 62 41 $\frac{1}{8}$ nouo |
| Lucidæ Balth. Androm. | 67 30 nouo |
| | pinn. |

DIE 26 DECEMBRIS.

Per volub. Azimuth.

| | |
|--------------------|---------------------|
| Canis maioris alt. | 17 53 $\frac{1}{2}$ |
| Canis minoris | 40 18 $\frac{3}{8}$ |
| Altit. Arcturi | 55 29 $\frac{3}{4}$ |

DIE 27 DECEMBRIS.

| | |
|---------------------|--------------------------|
| Alt. merid. capitis | 60 55 vet. |
| Andromedæ | 60 54 $\frac{3}{4}$ nou. |
| Lucidæ Balthæi | |
| Andromedæ | 67 30 nouo |

Obſervationes ſtellarum Caſiopeæ in diſtantijs ad imitationem Thaddæi.

| | | |
|--------|-------------------------|--------------------|
| Vnde- | II ^a Schedir | 6 26 $\frac{1}{2}$ |
| cima | III Cingulo | 5 23 |
| Caſ. a | XII Luc. Cathedræ | 4 46 $\frac{1}{2}$ |
| | Cynofura polari | 26 25 |
| | I Capite | 2 34 |
| II | III Cingulo | 1 39 $\frac{1}{2}$ |
| Sche- | IIII Flexura | 4 37 $\frac{1}{2}$ |
| dir a | XII Cathed. lucid. | 4 59 |
| | XI vt ſupra | |

| | | |
|-----------|------------------|---------------------|
| IV | III Cingulo | 3 21 $\frac{1}{2}$ |
| Flex- | V Genu | 3 36 |
| ura a | VI Crure | 7 19 $\frac{3}{4}$ |
| | XII Cath. lucid. | 6 12 |
| | Cynosura | 28 35 $\frac{1}{2}$ |
| III a XII | Lucida Cathe- | |
| | dræ & Cing. | 5 19 |
| V a VI | Genu a Crure | 4 50 |

TABULA LONGITUDINUM
& LATITUDINUM STELLARUM CASSIOPEÆ OMNIUM,
QUÆ JUXTA PROPRIAS OBSERVATIONES NUMERANTUR 26.
AD INITIUM ANNI 1573.

| | Longitudo | | | Latitudo | | |
|--|-----------|-----|------|----------|-----|-------|
| | P. | M. | S. | P. | M. | S. B. |
| I. Caput Caſſiopeæ | 29 | 11 | ✓ | 44 | 40½ | B |
| II. Schedir | 1 | 53½ | α | 46 | 35½ | B |
| III. Cingulum | 4 | 14 | α | 47 | 5½ | B |
| IV. Flexura | 8 | 3½ | α | 48 | 46 | B |
| V. Genu | 11 | 57 | α | 46 | 22 | B |
| VI. Crus | 18 | 49½ | α | 47 | 29 | B |
| VII. Extrema pedis | 26 | 15 | α | 48 | 54 | B |
| VIII. Brachium ſiniſtrum | 5 | 50½ | α | 43 | 6½ | B |
| IX. Cubitus ſiniſter | 4 | 52½ | α | 43 | 28 | B |
| X. Dexter Cubitus | 24 | 15½ | ✓ | 49 | 24½ | B |
| XI. Pes Cathedræ | 6 | 42 | α | 52 | 14 | B |
| XII. Lucida Cathedræ | 29 | 11 | 30"✓ | 51 | 14½ | B |
| XIII. Extrema Cathedræ | 25 | 10½ | ✓ | 51 | 8½ | B |
| XIV. Quæ eſt apud 13 vel extrema ſellæ | 25 | 8 | ✓ | 52 | 39 | B |
| XV. Illa quæ eſt in recta linea propemodum cum XI & media ſcabelli | 19 | 4 | α | 52 | 48 | B |
| XVI. Extrema ſcabelli | 21 | 57½ | α | 56 | 13 | B |
| XVII. Media ſcabelli | 22 | 9 | α | 54 | 27 | B |
| XVIII. In ſcabello proxime ad plantam pedis | 21 | 34 | α | 52 | 8½ | B |
| XIX. Illa quæ Genu ſequitur | 12 | 33½ | α | 44 | 57½ | B |
| XX. Illa quæ Genu præcedit | 9 | 36 | α | 45 | 4½ | B |
| XXI. Gyrus vmbilici | 6 | 28 | α | 47 | 31½ | B |
| XXII. Paruula ad Crines Caſſiopeæ | 28 | 46 | ✓ | 45 | 38 | B |
| XXIII. Sequens ex duabus borealioribus in Virga | 29 | 8 | ✓ | 41 | 15 | B |
| XXIV. Præcedens ex duabus Borealibus in Virga | 27 | 33 | ✓ | 41 | 25½ | B |
| XXV. Penultima Virgæ | 26 | 32 | ✓ | 39 | 15½ | B |
| XXVI. Extrema Virgæ | 25 | 30½ | ✓ | 38 | 19 | B |

OBSERVATIONES STELLARUM IN ASTERISMIS AUSTRALIBUS EXTRA ZODIACUM.

DIE 6 JANUARIJ.

Altitudines meridianæ.

Extrema Eridani per Sext. 28 24½

Sinister pes Orionis per Sext. 25 20½

Prima balthei Orionis
per Volub. 33 25½

Media balthei Orionis
per Volub. 32 33¼

3^a balthei Orionis
per Volub. 31 51½

per Sextant. 31 51½

Infima enfis Orion.
per Volub. 27 51½

9 28 30 Transiit dexter Pes Orionis

per Meridianum in Alt.

per Volub. 24 12

per Sext. 24 13

Canis maior in meridiæ
per Sext. 17 54

In bucca Ceti per Sext. 35 28

nou. alt. mer. dubia

Lucida mandibulæ

Ceti per Q. Tych.

vet. 36 31

nou. 36 30½

Lucidior exuuiarum

in Orione 40 15½ } per

Sinister hum. Orionis 39 59¾ } Q.

Caput Orionis in merid. 43 40¾ } Volub.

H. 9 33" 12" transiit lucidus humerus

Orionis per Meridianum in alt.

per Volub. 41 20¾

per Sext. 41 21

Canis minor. in meridiano

per Volub. 40 18¾

per Tych. 40 18½

vet. pin. 40 19

DIE 9 JANUARIJ, VESPERI.

Alt merid. 3^a balthei

Orionis 31 51½

9 26 20 Dexter Pes

Orionis 24 12½ } Per

Dext. humerus } Vo-

Orionis 41 20¾ } lub.

9 58 Pedis Canis ma-

ioris alt. mer. 16 16½

10^H20½^M Canis maior
per merid. alt. 17 53½

11 10 46 Canis minor
per merid. alt. 40 18

Ceruix Canis min. in alt. mer. 43 8½

DIE 11 JANUARIJ.

3^H43^M Secunda in □ Corui
in merid. 18 50¾

3 58 Tertia in □ Corui
Alt. mer. 19 53¾

DIE 14 JANUARIJ, VESPERI.

Pes lucidus Orionis in mer.

per Volub. alt. 25 22½

Sinister humerus Orionis
alt. mer. 40 1

merid. { I^a balthei Orionis 33 26½

Alt. { II^a balthei Or. 32 35

{ III^a balth. Or. 31 53

Præcedens Pes canis maioris 16 19

Canis maior alt. eius merid. 17 55½

Præcedens in Cane minore 45 9½

Canis minor alt. merid. 40 19½

DIE 15 JANUARIJ.

Dist. inter luc. Ped. Orionis

et canem min. I 38 36¾

II 38 36½

Inter obseruandum fuit III 38 36½

alt. luc. Pedis V 38 36½

Orionis 20 Part. IV 38 36½

DIE 20 JANUARIJ.

Extremæ Eridani Alt. mer. 28 25

Sinister Pes Orionis 25 20¼

non certa.

Sinister humerus Orionis 40 0½

I^a Cinguli Orionis 33 26

Caput Orionis 43 40¼

II^a Cinguli Orionis 32 33¾

III^a Cinguli Orionis 31 52½

Dexter pes Orionis 24 13½

Aldeb. occ. 20° 10' luc. hume-
rus Orionis in. mer. 41 21½

N. B. Omnes sequentes obseruationes altitudinis per quad. volubilem sunt exactiores prioribus & se bene habent, nam quadrans apposito & rectificato nouo cilindro bene erat verificatus. Funda te itaque in sequentibus adhibito murali in consilium.

DIE 26 JANUARIJ, MANE.

| | |
|--|---------------------|
| Dist. inter luc. Hydræ & | 30 20 $\frac{1}{2}$ |
| canem minorem | 30 20 |
| Inferioris præcedentium in \square^{to} | |
| corui alt. mer. | 13 43 $\frac{1}{2}$ |
| Superioris præcedentium \square^{ti} | |
| corui alt. mer. | 18 52 $\frac{1}{3}$ |

DIE 27 JANUARIJ.

| | Luc. γ occ. | | | |
|--|---|--------------------|---------------------|-----------------|
| 7 ^H 51 ^M 50 ["] | 51 54 | I Cing. Orionis | 33 25 $\frac{1}{3}$ | Altitud. merid. |
| 7 56 10 | 52 54 $\frac{3}{4}$ | II Cinguli Orion. | 32 33 $\frac{3}{4}$ | |
| 8 0 50 | 53 57 $\frac{3}{4}$ | III Cing. Orionis | 31 51 $\frac{2}{3}$ | |
| Caput Orionis alt. merid. per volub. | | | 43 41 | |
| Lucida enſis Orionis alt. mer. per vol. | | | 27 51 | |
| 8 8 55 | 56 1 $\frac{1}{2}$ | Dext. pes Orion. | 24 13 $\frac{1}{4}$ | |
| 8 13 45 | 57 15 | Dexter hum. Orion. | 41 21 $\frac{1}{6}$ | |
| 8 45 0 | 65 8 $\frac{1}{2}$ | Pes canis maioris | 16 18 $\frac{3}{4}$ | |
| Canis minor in alt. meridiana | | | 40 19 | |
| N. B. pro γ^{io} | Dist. inter canem minorem & finist. pedem orionis. Fuit tunc alt. Pedis Orionis | | 38 25 $\frac{3}{4}$ | |
| | Eadem Distantia canis min. & pedis Orion. Altitudo Pedis eiusdem | | 38 25 | |
| | | | 2 25 | |
| | Vera dist. est | | 38 37 $\frac{1}{2}$ | |

DIE 29 JANUARIJ.

| | Dist. inter Can. min. et cor γ | Declin. can. min. | Alt. Can. min. |
|--|---------------------------------------|--------------------|----------------|
| 3 ^H 59 ^M $\frac{1}{3}$ | 37 13 $\frac{3}{4}$ | 6 21 $\frac{3}{4}$ | 4 35 |
| 4 3 $\frac{1}{4}$ | 37 12 $\frac{1}{2}$ | 6 23 $\frac{1}{3}$ | 4 0 |
| 4 6 | 37 12 | 6 24 $\frac{2}{3}$ | 3 25 |
| 4 9 $\frac{1}{6}$ | 37 11 | 6 25 $\frac{1}{2}$ | 3 0 |
| 4 13 | 37 10 | 6 27 | 2 0 |

N. B. Hæc pro γ .

Vera distantia Canis min. & cordis γ est 37 19 $\frac{1}{2}$

Can. min. declinatio vera 6 13 $\frac{1}{2}$ borea

DIE 5 FEBRUARIJ.

| | | |
|-------------------------------------|---------------------|------------------------------------|
| Extremæ Eridani alt. mer. | 28 24 $\frac{5}{6}$ | Alt. mer. per γ . volubilem |
| Sinister Pes Orionis in merid. alt. | 25 21 $\frac{1}{4}$ | |
| Sinister humerus Orionis | 39 59 $\frac{2}{3}$ | |
| I ^a Cinguli Orionis | 33 25 | |
| II ^a Cinguli Orionis | 32 33 $\frac{1}{3}$ | |
| III ^a Cinguli Orionis | 31 51 $\frac{1}{2}$ | |
| Dext. Pes Orionis alt. mer. | 24 13 | |
| Dexter humerus Orionis in mer. | 40 20 $\frac{2}{3}$ | |

Distantiæ per Sextantem.

| | |
|--|-------------------------|
| Inter luc. Pedem Orionis & canem maiorem | II 23 41 $\frac{1}{2}$ |
| | III 23 41 $\frac{2}{3}$ |
| Inter canem maiorem & minorem | I 25 41 |
| | II 25 41 $\frac{1}{2}$ |
| | III 25 41 $\frac{1}{4}$ |
| | IV 25 41 $\frac{1}{4}$ |
| Inter canem minorem & luc. Pedem Orionis | I 38 37 $\frac{1}{4}$ |
| | 38 37 $\frac{1}{4}$ |
| | 38 37 $\frac{1}{3}$ |

DIE 22 FEBRUARIJ.

| | | |
|---|----------------------|-----------|
| Dist. oris canis maioris & pedis eius | I 5 35 $\frac{5}{6}$ | per Sext. |
| | 5 36 | |
| Alt. merid. stellæ sub aluo canis maioris | 5 46 | |

DIE 23 FEBRUARIJ.

| | |
|-------------------------------------|------------------------|
| Dist. capitis & pedis canis maioris | 5 33 $\frac{2}{3}$ ter |
|-------------------------------------|------------------------|

DIE 2 MARTIJ.

| | |
|--|-------|
| 11 ^H 3 ^M dist. inter canem min. & med. in cing. Orion. | 31 24 |
| decl. med. in cing. Orionis | 1 24 |
| Alt. med. eiusd. in cing. | 4 30 |

Dist. eadem canis min. & med cing.
 Orionis 31 22 $\frac{1}{3}$
 Declinatio mediæ in cing. 1 21 $\frac{1}{3}$
 Alt. eiusdem 3 30

vltcrius hæ duæ stellæ in cingulo Ori-
 onis mediæ propter rariusculas apud
 Horizontem nubes conspici non po-
 tuerunt.

DIE 3 MARTIJ.

Inter canem min. & med. 31 30 $\frac{1}{3}$
 balthi Orionis II 31 30 $\frac{1}{3}$
 III 31 30
 Inter canem maiorem & 5 35 $\frac{1}{3}$
 pedem eius anteriorem 5 35 $\frac{1}{3}$

DIE 15 NOUEMBRIS.

Declinatio caudæ Ceti M. 20 10 per
 Arm. aufst.

Inter sinist. hum. ∞ & 48 25 $\frac{1}{3}$
 caudam Ceti 48 25 $\frac{2}{3}$
 48 25 $\frac{1}{3}$

Inter luc. caudæ Ceti & 52 17 $\frac{2}{3}$
 os Pegasi 52 17 $\frac{2}{3}$

Inter Fomahant & 38 50
 inferius cornu γ 38 49
 per Sext. vet. 38 50 $\frac{1}{3}$
 38 50

Inter Fomahant & 26 44
 caudam Ceti 26 45
 per Sext. vet. 26 44

Fuit tunc Alt. Fomahant 2 $\frac{3}{4}$
 Declinatio Fomahant aufst. 31 29
 31 29

Azimut Fomahant 3 27 Alt. 2 31
 occ. 3 49 2 28
 4 9 2 22

per Q. Volub.

Altitudines Fixarum per
 Q. Tychonicum vespertino tempore.

DIE 9 JANUARIJ.

I^a in cingulo Orionis 33 25 vno
 Media 32 33
 vtroque
 Vltima 31 51 $\frac{3}{4}$
 31 51 $\frac{2}{3}$
 Dexter humerus Orionis 41 20 $\frac{1}{3}$

Pes canis maioris 16 17 $\frac{5}{6}$
 16 18
 Canis maior 17 54 $\frac{1}{6}$
 17 54 $\frac{1}{3}$

DIE 14 JANUARIJ.

I^a in cingulo Orionis 33 25 $\frac{3}{4}$ } incertæ
 2^{da} in cingulo 32 33 $\frac{3}{4}$ } propter
 3^a in cingulo 31 52 $\frac{1}{3}$ } nubes
 Canis maior 17 54 $\frac{1}{3}$

DIE 15 JANUARIJ.

Alt. mediæ in cingulo 32 32 $\frac{5}{6}$
 vtroque
 Extremæ 31 51
 Dexter pes Orionis 24 12 $\frac{5}{6}$
 24 13
 Lucidus humerus Orion. 41 20 $\frac{1}{3}$
 vtroque
 Alt. canis maioris 17 54

DIE 20 JANUARIJ.

Sinister pes Orionis 25 21
 25 21 $\frac{2}{3}$
 Sinister humerus Orionis 39 59 $\frac{2}{3}$
 Prima balthi 33 25
 2^{da} balthi 32 33
 32 33 $\frac{1}{3}$
 3^a balthi 31 51 $\frac{1}{2}$
 31 51 $\frac{2}{3}$
 Dexter pes Orionis 24 13
 Dexter humerus Orionis 41 20 $\frac{1}{3}$

DIE 26 JANUARIJ.

Extrema Eridani 28 24 $\frac{1}{3}$
 Sinist. pes Orionis 25 21 $\frac{1}{3}$
 25 21 $\frac{1}{2}$
 Sinister humerus 40 0
 39 59 $\frac{5}{6}$
 I^{ma} in cingulo 33 25 $\frac{1}{4}$
 33 25 $\frac{1}{6}$
 2^{da} in cingulo 32 33 $\frac{1}{3}$
 3^{ia} in cingulo 31 51
 Dext. pes Orionis 24 13
 24 12 $\frac{5}{6}$
 Dext. humerus Orionis 41 20 $\frac{1}{2}$
 vtroque
 Pes canis maioris 16 17 $\frac{5}{6}$
 16 18
 Canis maior 17 54 $\frac{1}{3}$
 17 54

Eodem vespere per volubilem.

| | |
|--------------------------|---------------------|
| Sinifter humerus Orionis | 39 59 $\frac{5}{8}$ |
| Ima balthei | 33 25 $\frac{5}{8}$ |

DIE 27 JANUARIJ.

| | |
|--------------------------------|---------------------|
| I ^a balthei Orionis | 33 25 |
| 2 ^{da} balthei | 32 33 |
| 3 ^{ia} balthei | 31 51 $\frac{2}{3}$ |
| | 31 51 $\frac{1}{2}$ |
| Dexter pes Orionis | 24 13 |
| Dext. humerus | 41 20 $\frac{1}{3}$ |
| | 41 20 $\frac{1}{2}$ |

DIE 5 FEBRUARIJ.

| | |
|----------------------------|---------------------|
| Sinifter humerus orionis | 39 59 |
| Ima in cingulo | 33 24 $\frac{5}{8}$ |
| | 33 25 |
| 3 ^{ia} in cingulo | 31 51 $\frac{1}{3}$ |
| Dexter pes orionis | 24 13 |
| Dexter humerus | 41 20 $\frac{2}{3}$ |

DIE 17 FEBRUARIJ.

| | |
|--------------------------|---------------------|
| Sinifter humerus Orionis | 39 59 $\frac{2}{3}$ |
| | 39 58 $\frac{1}{2}$ |
| in cingulo prima | 33 25 $\frac{1}{8}$ |
| | 33 24 |
| in cingulo secunda | 32 33 $\frac{1}{3}$ |
| in cingulo tertia | 31 51 $\frac{1}{2}$ |
| Dexter pes Orionis | 24 12 $\frac{5}{8}$ |
| Dexter humerus Orionis | 41 20 $\frac{1}{8}$ |
| | 41 19 $\frac{1}{2}$ |
| Canis minor per Tych. | 40 18 $\frac{2}{3}$ |

DIE 18 FEBRUARIJ.

| | |
|----------------------------|---------------------|
| Sinift. pes Orionis | 25 21 |
| Sinift. humerus | 39 59 $\frac{3}{4}$ |
| Ima in baltheo | 33 24 $\frac{3}{4}$ |
| 2 ^{da} in baltheo | 32 33 $\frac{1}{4}$ |
| 3 ^{ia} in baltheo | 31 51 $\frac{1}{2}$ |

Per Tychonicum matutino tempore

DIE 11 JANUARIJ.

| | |
|--|---------------------|
| Sequens borealis in \square^{to} corui | 17 54 $\frac{1}{8}$ |
| | 17 54 $\frac{1}{3}$ |
| Sequens australis in \square^{to} corui | 13 3 |

DIE 26 JANUARIJ.

| | |
|--|---------------------|
| Australis prima in \square^{to} corui | 13 43 $\frac{3}{4}$ |
| Sequens versus boream | 18 52 $\frac{2}{3}$ |
| | 18 52 $\frac{1}{2}$ |
| borealis Extrema in \square^{to} | 19 55 $\frac{1}{3}$ |
| | 19 55 |
| Sequens versus austrum | 13 2 $\frac{2}{3}$ |

Eodem die per Sextantem.

| | |
|--|---------------------|
| Prima in \square^{to} corui | 13 43 $\frac{1}{2}$ |
| Sequens eiusdem | 18 53 $\frac{1}{4}$ |
| Tertia in \square^{to} corui | 19 53 $\frac{3}{4}$ |
| Infima in \square^{to} versus austrum | 13 2 $\frac{1}{3}$ |

DIE 9 JANUARIJ

vespertino temp. per Q. Tychonicum.

| | |
|-----------------------------------|-----------------------------|
| Lucida Ceti | 36 31 $\frac{1}{2}$ vno |
| | 36 31 $\frac{1}{2}$ alt. |
| Altitudo primæ in Cingulo Orionis | 33 25 vno saltem pin. |
| Mediæ | 32 33 vtroque |
| Vltimæ | 31 51 $\frac{2}{3}$ vet. |
| | 31 51 $\frac{2}{3}$ nouo |
| Altitudo dextri pedis Orionis | 24 17 $\frac{1}{3}$ nouo |
| | 24 17 $\frac{1}{3}$ vet. |
| Dextri humeri Orionis | 41 20 $\frac{1}{3}$ vtroque |
| Pedis canis maioris | 16 17 $\frac{2}{3}$ nouo |
| | 16 18 vet. |
| Canis maioris alt. | 17 54 $\frac{1}{8}$ nouo |
| | 17 54 $\frac{1}{3}$ veteri |
| Canis minoris | 40 18 $\frac{2}{3}$ vtroque |
| DIE 14 JANUARIJ. | |
| Primæ in Baltheo Orionis | 33 25 $\frac{3}{4}$ inter |
| Mediæ | 32 33 $\frac{3}{4}$ } nubes |
| Extremæ | 31 52 $\frac{1}{8}$ } |
| Canis maior. | 17 54 $\frac{1}{3}$ vtroque |
| Canis minor. | 40 18 $\frac{1}{2}$ vtroque |
| DIE 15 JANUARIJ. | |
| Altit. canis maioris | 17 54 vtroque |
| Mediæ in Cingulo Orionis | 32 32 $\frac{5}{8}$ vtroque |
| Extremæ | 31 51 vtroque |
| Dextri pedis Orionis | 24 12 $\frac{5}{8}$ |
| Altero | 24 13 |
| Lucidæ humeri Orionis | 41 20 $\frac{1}{3}$ vtroque |
| DIE 20 JANUARIJ. | |
| Siniftri pedis Orionis | 25 21 |
| | 25 21 $\frac{2}{3}$ |
| Siniftri humeri Orionis | 39 59 $\frac{2}{3}$ |
| Primæ Balthei | 33 25 |

| | | |
|-----------------------|----|-------------------------|
| Mediæ Balthei | 32 | 33 |
| alt. | 32 | $33\frac{1}{3}$ |
| Extremæ Balthei | 31 | $51\frac{1}{2}$ |
| alt. | 31 | $51\frac{2}{3}$ |
| Dextri pedis Orionis | 24 | 13 |
| alt. | 24 | $13\frac{1}{6}$ |
| Dextri humeri Orionis | 41 | $20\frac{1}{3}$ vtroque |

DIE 26 JANUARIJ.

| | | |
|------------------------|----|-------------------------|
| Extremæ Erid. alt. | 28 | $24\frac{1}{3}$ vtroque |
| Siniftri pedis Orionis | 25 | $21\frac{1}{3}$ nouo |
| veteri | 25 | $21\frac{1}{2}$ fere |
| Siniftri humeri | 40 | 0 vet. |
| | 39 | $59\frac{5}{6}$ nouo |
| Primæ in Cingulo | 33 | $25\frac{1}{2}$ vet. |
| | 33 | $25\frac{1}{6}$ nouo |
| Mediæ | 32 | $33\frac{1}{3}$ vtroque |
| Vltimæ | 31 | 51 nouo |
| | | tantum |
| Dextri pedis Orionis | 24 | 13 veteri |
| | 24 | $12\frac{5}{6}$ nouo |
| Dextri humeri Orionis | 41 | $20\frac{1}{2}$ nouo |
| veteri | 41 | $20\frac{1}{2}$ fere |
| Pedis canis maioris | 16 | $17\frac{5}{6}$ nouo |
| | 16 | 18 veteri |
| Canis maior. | 17 | $54\frac{1}{3}$ vet. |
| | 17 | 54 nouo |

DIE 27 JANUARIJ.

| | | |
|-----------------------|----|----------------------|
| Prima Balthei Orionis | 33 | 25 vtroque |
| Secunda | 32 | $33\frac{1}{6}$ vet. |
| Tertia Balthei | 31 | $51\frac{1}{2}$ nouo |
| Dextri Orionis pedis | 24 | $13\frac{1}{6}$ vet. |
| | 24 | 13 nouo |

| | | |
|-----------------------|----|----------------------|
| Dextri humeri Orionis | 41 | $20\frac{1}{2}$ vet. |
| | 41 | $20\frac{1}{3}$ nouo |
| Canis maior. | 17 | $54\frac{1}{2}$ |
| Canis minor. | 40 | $18\frac{2}{3}$ |

DIE 18 FEBRUARIJ.

| | | |
|------------------------|----|----------------------|
| Sinifter pes Orionis | 25 | 21 nouo |
| | | falterem |
| Sinift. hum. Orionis | 39 | $59\frac{3}{4}$ nouo |
| Prima in Baltheo | | |
| Orionis | 33 | $24\frac{3}{4}$ nouo |
| Secund. Balth. Orionis | 32 | $33\frac{1}{4}$ |
| Tertia Balth. Orionis | 31 | $51\frac{1}{2}$ |
| Canis minor | 40 | $18\frac{1}{3}$ |

DIE 16 DECEMBRIS.

| | | |
|------------|----|-----------|
| Caudæ Ceti | 13 | 53 veteri |
| | | pinn. |

DIE 26 DECEMBRIS.

| | | |
|----------------------|----|----------------------|
| Lucidæ Hydræ alt. | 27 | $11\frac{1}{4}$ |
| Inferioris in mandi- | 36 | $31\frac{1}{3}$ vet. |
| bula Ceti | 36 | 31 nouo |
| Mediæ trium in Erid. | 22 | $53\frac{1}{2}$ |
| sub pectore γ | 22 | $53\frac{1}{3}$ |
| Alt. siniftri humeri | 41 | $20\frac{2}{3}$ |
| Orionis | 41 | $20\frac{1}{2}$ |
| Alt. stellæ præce- | 54 | 36 |
| dentis Arcturum | 54 | $35\frac{5}{6}$ |
| Alt. Arcturi merid. | 55 | $28\frac{1}{2}$ |

DIE 27 DECEMBRIS.

| | | |
|------------------------|----|-------------------------|
| Siniftri pedis Orionis | 25 | $26\frac{1}{2}$ vtroque |
| Siniftri humeri | 40 | 0 |
| Orionis | 39 | $59\frac{3}{4}$ |

OBSERVATIONES ANNI 1588.

OBSERVATIONES SOLIS.

DIE 3 JANUARIJ.

| | | |
|---------------|--------|---------------------|
| Alt. ☉ Merid. | | |
| per Tych. | vtroq. | 12 33 |
| per Volub. | | 12 32 $\frac{3}{4}$ |

DIE 9 JANUARIJ.

| | | |
|----------------------|-----------|---------------------|
| Alt. ☉ Merid. | | |
| per Tych., | vtroq. | 13 40 $\frac{1}{5}$ |
| per Q. Volub. | | 13 40 $\frac{1}{2}$ |
| Declin. per Armillas | vno | 20 23 |
| | alt. pin. | 20 23 $\frac{1}{3}$ |

Instrumento non bene rectificato.

DIE 10 JANUARIJ.

| | | |
|--------------------------|--------|---------------------|
| Alt. ☉ Merid. | veteri | 13 53 $\frac{1}{5}$ |
| per Tych. | nouo | 13 53 $\frac{2}{5}$ |
| per Q. Volub. | | 13 54 |
| per Q. Minim. | | 13 52 |
| Decl. per Armill. subtr. | | 20 12 |
| | | 20 12 $\frac{1}{4}$ |

DIE 13 JANUARIJ.

| | | |
|----------------------------|--------|---------------------|
| Alt. ☉ Merid. | | |
| per. Tych. | nouo | 14 31 |
| | veteri | 14 31 $\frac{1}{6}$ |
| per Q. Volub. | | 14 32 $\frac{3}{4}$ |
| per Q. Minim. | | 14 31 |
| Declin. per Armill. subtr. | | 19 31 $\frac{3}{4}$ |
| | | 19 31 $\frac{2}{5}$ |

DIE 19 JANUARIJ.

| | |
|--------------------------------------|----------------------------|
| Alt. Merid. per Volub. | 16 2 |
| | dubia |
| per Q. Tych. | vtroque 16 3 |
| per Q. max. Chalyb. | 16 4 $\frac{1}{2}$ |
| Chalyb. nondum erat satis correctus. | |
| per Sext. nouum. | 16 4 |
| Decl. per Armill. | 18 2 $\frac{1}{2}$ A. |
| | 18 2 $\frac{1}{3}$ |
| Repetita decl. | vtroque 18 2 $\frac{1}{2}$ |

DIE 22 JANUARIJ.

| | | |
|----------------------|-------|---------------------|
| Alt. ☉ Merid. | nouo | 16 51 $\frac{1}{3}$ |
| per Tych. | vet. | 16 51 35 |
| per Q. Volub. | | 16 51 $\frac{3}{4}$ |
| per Q. Max. | dubia | 16 53 |
| Declin. per Armillas | Au. | 17 14 |
| | | 17 13 $\frac{5}{8}$ |

| | |
|--------------------|---------------------|
| Repetita declin. ☉ | 17 14 |
| | 17 13 $\frac{3}{4}$ |

DIE 24 JANUARIJ.

| | |
|------------------------------|-------------------------|
| Alt. ☉ Merid. per Q. Volub. | 17 26 $\frac{1}{2}$ |
| per Max. | 17 27 $\frac{1}{2}$ |
| non satis erat correctus. | |
| per Q. Tychon | vno 17 26 $\frac{1}{6}$ |
| | alt 17 26 $\frac{2}{3}$ |
| per Sext. nouum | 17 26 $\frac{2}{3}$ |
| Decl. ☉ per Armill., vtroque | 16 39 |

DIE 30 JANUARIJ¹.

| | | |
|--------------------------|------|---------------------|
| Alt. ☉ Merid. | nouo | 19 16 $\frac{1}{2}$ |
| per Tych. | vet. | 19 16 $\frac{2}{3}$ |
| per Chalyb. max. | | 19 17 $\frac{1}{2}$ |
| non erat satis correctus | | |
| per Volub. | | 19 16 $\frac{3}{4}$ |
| per Sext. nou. | | 19 16 $\frac{2}{3}$ |
| Declin. per Armill. | vno | 14 49 |
| | alt. | 14 48 $\frac{5}{6}$ |

DIE 4 FEBRUARIJ.

| | | |
|------------------------------|--------|---------------------|
| Alt. ☉ Merid. | | |
| per Tych. | vtroq. | 20 55 |
| per Volub. | | 20 55 |
| per Chalyb. | | 20 55 $\frac{1}{2}$ |
| per Sext. Trig. | | 20 55 $\frac{5}{6}$ |
| Declin. per Armill., vtroque | | 13 10 $\frac{1}{2}$ |
| Non erat satis serenum. | | |

DIE 5 FEBRUARIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 21 15 $\frac{1}{2}$ |
| per Volub. | 21 15 $\frac{1}{6}$ |
| per Tych. | vet. 21 15 $\frac{1}{2}$ |
| | nouo 21 15 $\frac{1}{3}$ |
| per Sext. nou. | 21 15 $\frac{1}{4}$ |
| Decl. per Armillas | 12 50 $\frac{1}{3}$ |
| | 12 50 $\frac{1}{4}$ |

DIE 6 FEBRUARIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 21 36 $\frac{1}{3}$ |
| per Volub. | 21 35 $\frac{1}{2}$ |
| per Q. Tych. | nouo 21 36 |
| | vet. 21 36 $\frac{1}{6}$ |
| per Sext. nouum | 21 36 |
| Declin. per Armillas | 12 30 |
| | 12 30 $\frac{1}{8}$ |

¹ Cf. T. II p. 87.

DIE 7 FEBRUARIJ.

| | | |
|------------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 21 | 57 $\frac{1}{4}$ |
| per Volub. | 21 | 56 $\frac{2}{3}$ |
| per Tych. | nouo | 21 56 $\frac{1}{2}$ |
| | vet. | 21 56 $\frac{2}{3}$ |
| per Sext. nou. | 21 | 56 $\frac{1}{2}$ |
| Decl. ☉ per Armill., vtroque | 12 | 9 $\frac{1}{2}$ |

DIE 8 FEBRUARIJ.

| | | | |
|--|------|----|------------------|
| Declin. Solis post aliter ordinatas in polum | vno | 11 | 47 $\frac{1}{4}$ |
| Armillas | alt. | 11 | 47 $\frac{1}{3}$ |

| | | |
|------------------|----|------------------|
| Alt. ☉ Merid. | | |
| per Tych. vtroq. | 22 | 17 $\frac{1}{2}$ |
| per Muralem | 22 | 17 $\frac{1}{2}$ |
| per Chalyb. | 22 | 18 |
| per Sext. nou. | 22 | 17 $\frac{2}{3}$ |
| per Q. min. | 22 | 17 |

| | | |
|------------------------|----|------------------|
| Declin. ☉ per Armillas | 11 | 47 $\frac{1}{3}$ |
| | 11 | 47 $\frac{1}{4}$ |

| | | |
|----------|----|------------------|
| Repetita | 11 | 47 |
| | 11 | 47 $\frac{1}{4}$ |

DIE 10 FEBRUARIJ.

| | | |
|---------------------------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | 23 | 0 $\frac{1}{2}$ |
| per Volub. | 22 | 59 $\frac{2}{3}$ |
| per Muralem vtroq. | 23 | 0 $\frac{1}{2}$ |

| | | |
|---------------------|----|-----------------|
| Declin. per Armill. | 11 | 4 $\frac{5}{6}$ |
| | 11 | 4 $\frac{3}{4}$ |

DIE 11 FEBRUARIJ.

| | | |
|---------------------------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | 23 | 21 $\frac{1}{4}$ |
| per Volub. | 23 | 20 $\frac{2}{3}$ |
| per Muralem vtroq. | 23 | 21 $\frac{1}{2}$ |
| per Sext. nouum | 23 | 21 |
| Declin. per Armill. | 10 | 43 $\frac{1}{3}$ |
| | 10 | 43 $\frac{1}{4}$ |

DIE 12 FEBRUARIJ.

| | | |
|---------------------------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | 23 | 43 $\frac{1}{2}$ |
| per Volub. | 23 | 43 |
| per Q. Mural. vtroq. | 23 | 43 $\frac{1}{2}$ |
| per Sext. nouum | 23 | 43 $\frac{2}{3}$ |
| Declin. ☉ per Armill. | 10 | 21 $\frac{5}{6}$ |
| | 10 | 21 $\frac{3}{4}$ |

DIE 15 FEBRUARIJ.

| | | |
|----------------------------|------|------------------|
| Alt. ☉ Merid. per Chalyb. | 24 | 49 $\frac{1}{2}$ |
| per Volub. | 24 | 49 $\frac{1}{3}$ |
| per Tychon. vno | 24 | 49 $\frac{1}{6}$ |
| | alt. | 24 49 |
| per Sext. nouum | 24 | 49 |
| Declin. per Armill. vtroq. | 9 | 15 $\frac{1}{2}$ |

DIE 16 FEBRUARIJ P. M.

obseruabatur Eclipsis Solis in hunc modum vt sequitur.

Si ponas huius Eclipsis initium

H. 1 M. 25 & finem

H. 2 M. 55, Tota duratio 1 30

Dimidia duratio 45

Medium Eclipsis 2 10

Calculus Prutenicus habet medium

H. 1. 25 idque $\frac{1}{4}$ horæ antè. Mæstlini neoterica restitutio propius accedit, statuens Medium Hora 2 M. 14.



Azim. ☉ occ. Alt.

H. 1 31 $\frac{1}{2}$ 24 40 22 30

Primum animaduersum est aliquid deeße.

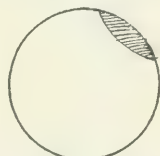


1 34 $\frac{2}{3}$ 25 30 22 19

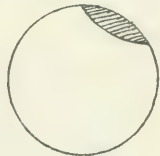


1 43 27 30 21 50 $\frac{1}{2}$
quasi 12^{ma} pars

1 46 28 35 21 33

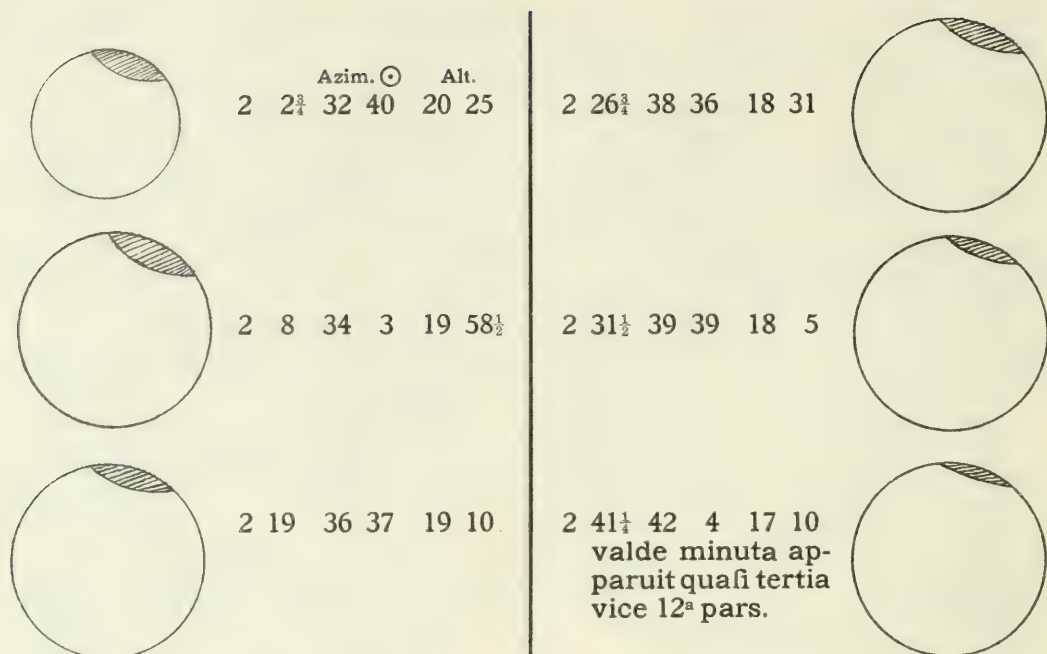


1 51 $\frac{1}{4}$ 29 40 21 17
Adhuc crescens



1 57 31 10 20 52

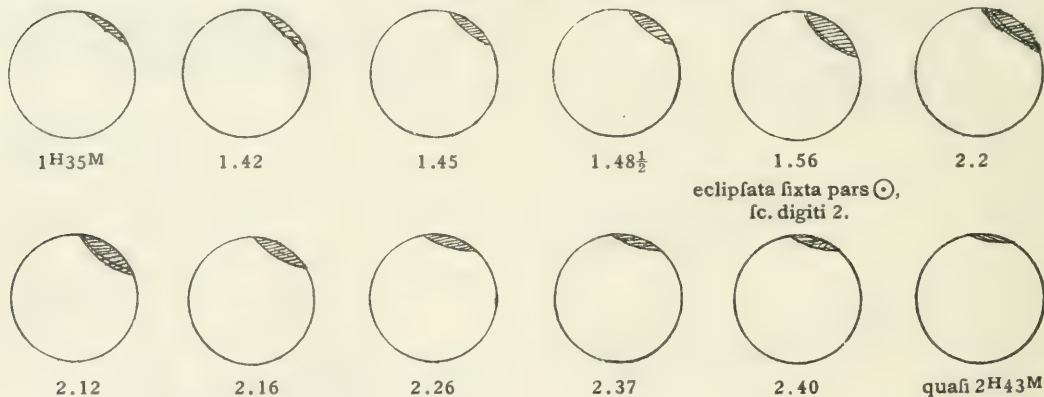




2 51 44 18 16 $\frac{1}{3}$ inter nubes Sol totus rotundus apparuit.

N. B. In principio Eclipses erat mediocriter serenum, in medio bene, in fine nubes subdixerunt ☉, vt non satis accurate videri potuisset. Tempora assignata sunt correcta.

Apud Armillas australes eiusdem obseruatio prout in sequentibus depingitur, vbi tempora assignata per ipsas Armillas a ☉ accepta.



Initium Eclipses H. 1 M. 30

Finis Eclipses 2 52

Tota duratio 1 22

Dimid. 41

Medium Eclipses 2 11

Medium huius Eclipses H. 2 M. 10.

DIE 17 FEBRUARIJ.

| | |
|------------------------------|--------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 25 34 |
| per Q. Volub. | 25 33 $\frac{1}{2}$ |
| per Q. Tych. | vno 25 34 |
| | alt. 25 34 $\frac{1}{8}$ |
| Declin. per Armillas | 8 31 |
| | 8 31 $\frac{1}{4}$ |

DIE 19 FEBRUARIJ.

| | |
|------------------------------|-------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 26 19 5 |
| per Q. Volub. | 26 18 55 |
| per Q. Mural. | vtroq. 26 18 50 |
| Declin. ☉ | vno 7 46 |
| per Armillas | alt. 7 46 $\frac{1}{4}$ |
| Repetita, auf. | vno 7 46 |
| | alt. 7 45 $\frac{3}{4}$ |
| Repetita denuo | vno 7 46 |
| | alt. 7 45 $\frac{3}{4}$ |

Nota. Verior itaque declinatio colligitur, collatis singulis P. 7 M. 46 complete, altitudo autem vera 26 19, qua ablata a 34 5 prouenit eadem declinatio 7 46.

Vel sic omnia scrupulose trutinando

| | |
|---|---------|
| Alt. per Chalyb. | 26 19 5 |
| | 34 5 0 |
| Declinatio | 7 45 55 |
| Vno pinnacidio | 7 46 0 |
| Altero | 7 45 45 |
| Vera declinatio | 7 45 53 |
| <i>quod concordat in duobus fecundis.</i> | |

DIE 22 FEBRUARIJ.

| | |
|---------------------------|------------------------|
| Alt. ☉ Merid. per Chalyb. | 27 27 $\frac{1}{2}$ |
| per Volub. | 27 27 $\frac{1}{2}$ |
| per Sext. nouum | 27 28 |
| Decl. per Armill. | vno 6 36 $\frac{1}{2}$ |
| | alt. 6 37 |
| Repetita | 6 37 $\frac{1}{8}$ |
| | 6 36 $\frac{3}{4}$ |

Vmbra per canalem non satis exquisita fuit.

DIE 23 FEBRUARIJ.

| | |
|------------------------------|---------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 27 50 $\frac{3}{8}$ |
| per Q. Volub. | 27 50 35 |
| per Muralem vtroque | 27 50 $\frac{1}{4}$ |
| per Sext. nouum | 27 51 |
| Declin. per Armillas | 6 15 $\frac{1}{4}$ |
| | 6 15 $\frac{3}{4}$ |

DIE 25 FEBRUARIJ.

| | |
|-----------------------------|---------------------|
| Alt. ☉ Merid. per Q. Volub. | 28 37 |
| per Q. Chalyb. | 28 37 |
| per Q. Mural. vtroque | 28 37 |
| per Sext. nouum | 28 36 $\frac{2}{3}$ |
| Decl. ☉ per Armillas | 5 28 $\frac{3}{4}$ |
| | 5 28 |

DIE 27 FEBRUARIJ.

| | |
|---------------------------|----------------------------|
| Alt. ☉ Merid. per Chalyb. | 29 23 |
| per Volub. | 29 23 $\frac{1}{6}$ |
| per Mural. nouo pin. | 29 23 $\frac{1}{2}$ |
| | altero 29 23 $\frac{2}{3}$ |
| per Sext. nouum | 29 24 |
| Decl. ☉ per Armill. | 4 41 $\frac{1}{2}$ |
| | 4 41 |
| Repetita Decl. | 4 41 $\frac{2}{3}$ |
| | 4 41 |

DIE 28 FEBRUARIJ.

| | |
|---|--------------------------|
| Horologium in Meridie 10' 30" iusto velocius mouebatur. | |
| Alt. ☉ Merid. per Q. Tych. | 29 46 $\frac{5}{8}$ |
| per Chalyb. | 29 46 $\frac{2}{3}$ |
| per Volub. | 29 46 35 |
| per Sext. nou. | 29 46 $\frac{1}{2}$ |
| Declin. ☉ per Armill. | 4 17 |
| | 4 17 $\frac{1}{4}$ |
| Repetita | 4 17 |
| | dubiæ 4 17 $\frac{1}{2}$ |
| H. 12 40 $\frac{1}{2}$ repet. declin. | 4 17 |

DIE 29 FEBRUARIJ.

| | |
|----------------------|----------------------------|
| Alt. ☉ Mer. | |
| per Tych. | vtroq. 30 10 $\frac{1}{2}$ |
| per Sext. nou. | 30 10 $\frac{3}{4}$ |
| per Chalyb. | 30 10 $\frac{1}{6}$ |
| per Volub. | 30 10 $\frac{1}{6}$ |
| Decl. ☉ per Armillas | 3 54 $\frac{2}{3}$ |
| | 3 54 $\frac{1}{3}$ |

N. B. Horologium in Meridie 15 $\frac{1}{2}$ iusto tardius mouebatur ab H. 9 $\frac{1}{2}$ vespertina.

DIE 1 MARTIJ.

| | |
|---------------------|--------------------------|
| Alt. ☉ Merid. | vet. 30 33 $\frac{5}{8}$ |
| per Q. Tych. | nou. 30 33 $\frac{2}{3}$ |
| per Sext. nou. | 30 34 |
| per Q. Chalyb. | 30 33 $\frac{1}{3}$ |
| per Q. Volub. | 30 33 |
| Declin. per Armill. | 3 31 |
| | 3 31 $\frac{1}{3}$ |

N. B. Horol. 18' 5'' celerius iusto movebatur a Meridie antecedentis diej.

DIE 2 MARTIJ.

| | | | |
|------------------------------|------|-----------------|------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 30 | 57 | 25 |
| per Volub. | 30 | 57 | 30 |
| per Q. Tych. | nouo | 30 | 57 $\frac{3}{8}$ |
| | vet. | 30 | 57 $\frac{5}{8}$ |
| H. 12. 8 Decl. per Arm. | 3 | 7 $\frac{1}{4}$ | |
| alt. pinnacid. | 3 | 7 $\frac{2}{3}$ | |
| H. 12. 12 Decl. repetita | 3 | 7 $\frac{3}{4}$ | |
| | 3 | 7 $\frac{1}{2}$ | |

DIE 8 MARTIJ.

| | | |
|------------------------------|--------|---------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 33 | 19 |
| per Q. Volub. | 33 | 19 $\frac{1}{2}$ |
| per Q. Tych. | nouo | 33 19 |
| | vet. | 33 19 $\frac{1}{8}$ |
| per Sext. nou. | 33 | 18 $\frac{1}{2}$ |
| Declin. ☉ per Arm. | Auftr. | 0 46 |
| | | 0 46 $\frac{1}{8}$ |
| H. 12. 6 repetita | | 0 46 |
| | | 0 45 $\frac{5}{8}$ |

DIE 12 MARTIJ.

| | | |
|---------------------------|----|--------------------|
| Alt. ☉ Merid. per Chalyb. | 34 | 53 $\frac{1}{4}$ |
| per Volub. | 34 | 53 $\frac{1}{8}$ |
| per Sext. nou. | 34 | 53 $\frac{3}{4}$ |
| Declin. per Armill. | B. | 0 47 $\frac{1}{2}$ |
| | | 0 47 $\frac{1}{4}$ |

DIE 14 MARTIJ.

| | | |
|------------------------------|----|--------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 35 | 40 $\frac{2}{3}$ |
| per Q. Volub. | 35 | 41 |
| per Q. Tych. | 35 | 40 $\frac{5}{8}$ |
| per Sext. nou. | 35 | 41 |
| Declin. ☉ per Armill. | B. | 1 35 $\frac{1}{8}$ |
| | | 1 35 $\frac{3}{8}$ |

DIE 15 MARTIJ.

| | | |
|------------------------------|----------|--------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 36 | 4 $\frac{1}{4}$ |
| per Q. Volub. | 36 | 4 $\frac{1}{4}$ |
| per Q. Tych. | vno pin. | 36 4 $\frac{1}{8}$ |
| per Sext. nou. | 36 | 4 $\frac{2}{3}$ |
| Declin. per Armill. | | 1 59 |
| | | 1 59 $\frac{1}{4}$ |

DIE 27 MARTIJ.

| | | |
|--------------------------|----|------------------|
| Alt. ☉ Merid. per Volub. | 40 | 41 $\frac{1}{2}$ |
| per Tychon. | 40 | 41 $\frac{1}{3}$ |
| per Sext. nou. | 40 | 41 $\frac{1}{4}$ |
| Declin. per Armillas | 6 | 36 $\frac{1}{2}$ |
| | 6 | 36 $\frac{1}{3}$ |

DIE 29 MARTIJ.

| | | |
|----------------|------|---------------------|
| Alt. ☉ Merid. | nouo | 41 25 $\frac{5}{8}$ |
| per Tych. | vet. | 41 26 $\frac{1}{4}$ |
| per Sext. nou. | | 41 26 $\frac{1}{2}$ |

N. B. Fuit Sol inter nubes.

DIE 5 APRILIS.

| | | |
|---------------------|--------|---------------------|
| Alt. ☉ Merid. | | |
| per Tych. | vtroq. | 43 59 45 |
| per Volub. | | 43 59 35 |
| per Chalyb. | | 43 59 $\frac{2}{3}$ |
| Declin. per Armill. | | 9 54 B. |
| | | 9 53 $\frac{1}{2}$ |

DIE 16 APRILIS.

| H. M. | ☉ ab ortu | Decl. ☉ |
|--------------------|-----------|----------------------------|
| 3 23 $\frac{1}{2}$ | 140 52 | 13 41 $\frac{1}{2}$ |
| 3 25 $\frac{1}{3}$ | 141 20 | 13 41 $\frac{1}{2}$ |
| 4 6 | 151 28 | 13 41 $\frac{1}{4}$ |
| 4 8 $\frac{2}{3}$ | 152 10 | 13 41 $\frac{1}{2}$ melius |

DIE 27 APRILIS.

| | | |
|-------------------------|----|------------------|
| Alt. ☉ Merid. per Tych. | 51 | 0 $\frac{1}{4}$ |
| per Volub. | 51 | 0 $\frac{1}{2}$ |
| per Chalyb. | 51 | 0 $\frac{1}{4}$ |
| Decl. per Armillas | 16 | 54 $\frac{3}{4}$ |

DIE 28 APRILIS.

| | | |
|----------------------|--------|---------------------|
| Alt. ☉ Merid. | | |
| per Tych. | vtroq. | 51 17 $\frac{1}{6}$ |
| per Chalyb. | | 51 16 $\frac{1}{2}$ |
| per Volub. | | 51 16 $\frac{2}{3}$ |
| Declin. per Armillas | | 17 11 $\frac{1}{4}$ |
| | | 17 11 $\frac{1}{2}$ |

DIE 1 MAIJ.

| | | |
|---------------------------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | 52 | 4 |
| per Volub. | 52 | 3 $\frac{2}{3}$ |
| per Muralem | 52 | 4 $\frac{1}{8}$ |
| Declin. per Armillas | 17 | 58 $\frac{3}{4}$ |
| | 17 | 59 |

DIE 3 MAIJ.

| | | |
|---------------------------|------------|------------------|
| Alt. ☉ Merid. per Chalyb. | 52 | 33 $\frac{3}{4}$ |
| per Volub. | 52 | 33 $\frac{1}{2}$ |
| per Q. Tychon. | 52 | 33 $\frac{5}{8}$ |
| Declin. per Armill. | 18 | 29 $\frac{1}{4}$ |
| | alt. pinn. | 18 29 |

DIE 5 MAIJ.

| | | |
|--------------------------|----|------------------|
| Alt. ☉ Merid. per Mural. | 53 | 3 $\frac{1}{4}$ |
| per Volub. | 53 | 2 $\frac{1}{2}$ |
| per Chalyb. | 53 | 2 $\frac{3}{4}$ |
| Declin. per Armillas | 18 | 58 |
| | 18 | 58 $\frac{1}{3}$ |

DIE 10 MAIJ.

| | | |
|---------------------------|----|----------------|
| Alt. ☉ Merid. per Chalyb. | 54 | $8\frac{1}{2}$ |
| per Volub. | 54 | $9\frac{1}{4}$ |
| per Tych. vtroque | 54 | $9\frac{2}{3}$ |
| Declin. per Armillas | 20 | $3\frac{2}{3}$ |
| | 20 | $3\frac{1}{2}$ |

DIE 17 MAIJ.

| | | |
|--------------------------|----|-----------------|
| Alt. ☉ Merid. per Volub. | 55 | $27\frac{1}{2}$ |
| per Chalyb. | 55 | 27 |
| per Tychon. vtroque | 55 | 28 |
| Declin. per Armillas | 21 | 23 |
| | 21 | $22\frac{1}{3}$ |

Erat mediocriter ferenum.

DIE 19 MAIJ.

| | | |
|-------------------------|----|-----------------|
| Alt. ☉ Merid. per Tych. | 55 | $47\frac{1}{4}$ |
| | 55 | $47\frac{1}{3}$ |
| per Volub. | 55 | 47 |
| per Chalyb. | 55 | $46\frac{1}{2}$ |
| Declin. per Armillas | 21 | 42 |
| | 21 | $42\frac{1}{3}$ |

DIE 23 MAIJ.

| | | |
|-------------------------|----|-----------------|
| Alt. ☉ Merid. per Tych. | 56 | $21\frac{1}{6}$ |
| per Volub. | 56 | $20\frac{1}{2}$ |
| per Chalyb. | 56 | $20\frac{1}{4}$ |
| Declin. per Armillas | 22 | $16\frac{1}{2}$ |
| | 22 | $16\frac{2}{3}$ |

DIE 30 MAIJ.

| | | | |
|-------------------------------|----|----------------|----|
| Alt. ☉ Mer. per Mural. vtroq. | 57 | 5 | 50 |
| per Volub. | 57 | $5\frac{1}{4}$ | |
| per Ferreum | 57 | 5 | |

DIE 1 JUNIJ.

| | | |
|--------------------------|----|-----------------|
| Alt. ☉ Merid. per Volub. | 57 | 14 |
| per Ferreum | 57 | $14\frac{1}{2}$ |
| per Tych. | 57 | $14\frac{3}{4}$ |
| Declin. per Armillas | 23 | 10 |
| | 23 | $9\frac{5}{6}$ |

DIE 3 JUNIJ.

| | | |
|--------------------------|----|-----------------|
| Alt. ☉ Merid. per Mural. | 57 | 22 |
| per Volub. | 57 | 22 |
| per Ferreum | 57 | $21\frac{3}{4}$ |
| Declin. ☉ | 23 | $17\frac{1}{3}$ |

DIE 8 JUNIJ.

| | | |
|--------------------------|----|-----------------|
| Alt. ☉ Merid. per Volub. | 57 | $32\frac{1}{2}$ |
| per Chalyb. | 57 | $32\frac{3}{4}$ |
| per Muralem | 57 | 33 |
| Declin. per Armillas | 23 | $28\frac{1}{3}$ |
| | 23 | $28\frac{1}{4}$ |

DIE 9 JUNIJ.

| | | |
|-------------------------|----|-----------------|
| Alt. ☉ Mer. per Ferreum | 57 | 34 |
| per Volub. | 57 | 34 |
| per Mural. | 57 | 35 |
| Declin. per Armill. | 23 | $29\frac{3}{4}$ |
| | 23 | $29\frac{5}{6}$ |

DIE 10 JUNIJ A. M.

| Declin. ☉ | Altitudo ☉ | Azim. a Mer. |
|--------------------|-------------------|--------------|
| 23 $36\frac{3}{4}$ | 6 26 | |
| 23 $36\frac{1}{2}$ | 6 53 | |
| 23 $36\frac{1}{2}$ | 7 3 | |
| 23 $36\frac{1}{3}$ | 7 10 | |
| 23 36 | 7 $22\frac{1}{2}$ | 121 40 |
| 23 $35\frac{2}{3}$ | 7 42 | 121 10 |
| 23 $35\frac{1}{2}$ | 8 5 | 120 35 |
| 23 35 | 8 21 | 120 12 |
| 23 $34\frac{1}{2}$ | 8 32 | 119 50 |
| 23 $33\frac{3}{4}$ | 8 44 | 119 30 |
| 23 $33\frac{1}{3}$ | 9 1 | 119 0 |
| 23 33 | 9 32 | 118 10 |
| 23 $32\frac{3}{4}$ | 10 0 | 117 26 |
| 23 $32\frac{3}{4}$ | 10 22 | 116 55 |
| 23 $32\frac{1}{2}$ | 11 0 | 115 55 |
| 23 $32\frac{1}{3}$ | 12 0 | 114 20 |
| 23 32 | 13 0 | 112 50 |
| 23 $31\frac{2}{3}$ | 14 40 | 110 18 |

| | | |
|----------------------------------|----|-----------------|
| Alt. ☉ Merid. . . . ¹ | 57 | 35 |
| per Muralem | 57 | $34\frac{5}{6}$ |
| Declin. ☉ | 23 | $30\frac{1}{2}$ |
| | 23 | $30\frac{3}{4}$ |

DIE 11 JUNIJ.

| | | | |
|--------------------------|----|-----------------|----|
| Alt. ☉ Mer. per Q. Tych. | 57 | 35 | 35 |
| per Q. Volub. | 57 | 35 | 30 |
| Declin. ☉ per Arm. subt. | 23 | $30\frac{1}{2}$ | |
| | 23 | $30\frac{5}{6}$ | |

Eodem die P. M.

| Decl. ☉ | Alt. ☉ | |
|--------------------|--------|----------|
| 23 31 | 17 10 | 57 35 30 |
| 23 $31\frac{1}{4}$ | 16 40 | 1 35 |
| 23 $31\frac{1}{4}$ | 16 0 | 57 37 0 |
| 23 $31\frac{2}{3}$ | 15 0 | 34 5 10 |
| 23 31 | 14 0 | 23 31 50 |

DIE 12 JUNIJ.

| | | |
|--------------------------|----|-----------------|
| Alt. ☉ Merid. per Mural. | 57 | $35\frac{2}{3}$ |
| per Volub. | 57 | 35 |
| per Ferreum | 57 | $35\frac{3}{4}$ |
| Declin. per Armill. | 23 | $31\frac{1}{2}$ |
| | 23 | 31 |

¹ Nulla mentio instrumenti in codice D.

Eodem die P. M.

| Decl. ☉ | Alt. ☉ | Azim. a mer. ad occ. | |
|---------------------|--------|-------------------------|------------|
| 23 31 $\frac{1}{2}$ | 11 15 | | |
| 23 32 $\frac{1}{4}$ | 11 0 | 116 9 | |
| 23 32 $\frac{3}{4}$ | 10 45 | 116 35 | |
| 23 33 | 10 30 | 117 15 | |
| 23 33 $\frac{1}{2}$ | 9 24 | 118 48 | 57 35 |
| 23 34 | 8 52 | 119 40 | 1 34 |
| 23 34 $\frac{1}{2}$ | 8 12 | 120 38 | 57 36 34 |
| 23 34 $\frac{3}{4}$ | 7 39 | 121 35 | 34 5 15 |
| 23 35 $\frac{1}{4}$ | 6 55 | 122 50 | 23 31 20 |
| 23 35 $\frac{3}{4}$ | 5 59 | 124 28 | Decl. Max. |

DIE 13 JUNIJ.

| | |
|------------------------------|---------------------|
| Alt. ☉ Mer. per Tych. vtroq. | 57 35 |
| per Volub. | 57 34 $\frac{1}{2}$ |
| per Chalyb. | 57 34 $\frac{1}{8}$ |
| Declin. per Armillas | 23 31 |
| | 23 30 $\frac{3}{4}$ |

Eodem die P. M.

| Decl. ☉ | Alt. ☉ | Azim. a mer. ad occ. |
|---------------------|--------|-------------------------|
| 23 33 $\frac{1}{2}$ | 6 44 | 123 7 |
| 23 33 $\frac{2}{3}$ | 6 15 | 123 57 |
| 23 35 | 5 42 | 124 55 |
| 23 35 $\frac{1}{2}$ | 4 54 | 126 25 |
| 23 36 | 4 30 | 127 6 |
| 23 37 | 4 10 | 127 38 |

DIE 14 JUNIJ.

| | |
|------------------------------|---------------------|
| Alt. ☉ Mer. per Tych. vtroq. | 57 33 $\frac{2}{3}$ |
| per Volub. | 57 33 |
| per Chalyb. | 57 33 |
| Declin. per Armill. | 23 28 $\frac{1}{2}$ |
| | 23 28 $\frac{1}{4}$ |

| Declin. ☉ | Alt. ☉ | Azim. a Mer. ad occ. |
|---------------------|--------|-------------------------|
| 23 30 $\frac{1}{2}$ | 9 17 | 118 50 |
| 23 31 | 8 52 | 119 29 |
| 23 31 $\frac{2}{3}$ | 8 30 | 120 7 |
| 23 32 | 8 19 | 120 20 |
| 23 35 $\frac{1}{4}$ | 4 42 | 126 41 |
| 23 36 | 4 12 | 127 35 |
| 23 36 $\frac{2}{3}$ | 3 53 | 128 10 |
| 23 37 | 3 46 | 128 25 |
| 23 37 $\frac{1}{3}$ | 3 38 | 128 41 |
| 23 37 $\frac{1}{2}$ | 3 24 | 129 3 $\frac{1}{2}$ |
| 23 37 $\frac{3}{4}$ | 3 17 | 129 22 |
| 23 38 | 3 7 | 129 38 |

| | | |
|---------------------|------|--------|
| 23 38 $\frac{3}{4}$ | 2 53 | 130 8 |
| 23 39 $\frac{1}{4}$ | 2 42 | 130 31 |
| 23 39 $\frac{3}{4}$ | 2 32 | 130 48 |
| 23 40 $\frac{1}{4}$ | 2 27 | 131 2 |
| 23 41 | 2 17 | 131 19 |
| 23 41 $\frac{1}{2}$ | 2 5 | 131 49 |
| 23 42 | 1 57 | 132 3 |
| 23 43 | 1 50 | 132 19 |
| 23 44 $\frac{1}{2}$ | 1 39 | 132 40 |
| 23 45 $\frac{1}{2}$ | 1 29 | 133 9 |

DIE 15 JUNIJ A. M.

| Declin. ☉ | Alt. ☉ | Azim. or. |
|---------------------|--------|-----------|
| 23 30 $\frac{3}{4}$ | 9 30 | 118 12 |
| 23 30 $\frac{3}{4}$ | 9 59 | 117 21 |
| 23 30 $\frac{5}{6}$ | 10 18 | 116 50 |
| 23 30 $\frac{1}{2}$ | 10 31 | 116 30 |
| 23 30 | 13 30 | 111 59 |
| 23 30 | 13 47 | 111 30 |
| 23 29 $\frac{5}{6}$ | 13 45 | 109 59 |
| 23 29 $\frac{5}{6}$ | 15 1 | 109 40 |

| | |
|-----------------------|--------------------------|
| Alt. ☉ Mer. per Tych. | vet. 57 32 $\frac{1}{8}$ |
| | nouo 57 32 $\frac{1}{2}$ |
| per Volub. | 57 32 |
| Decl. per Armillas | 23 27 $\frac{1}{2}$ |

DIE 14 JULIJ.

| | |
|----------------------------|---------------------|
| Alt. Mer. per Tych. vtroq. | 53 59 $\frac{1}{4}$ |
| | ferre |
| per Volub. | 53 59 |
| per Chalyb. | 53 58 $\frac{3}{4}$ |
| Declin. per Armillas | 19 53 $\frac{1}{2}$ |
| | 19 53 $\frac{1}{4}$ |

DIE 18 JULIJ.

| | |
|------------------------|--------------------|
| Alt. ☉ Mer. per Mural. | 53 6 $\frac{1}{8}$ |
| | 53 5 $\frac{5}{8}$ |
| per Volub. | 53 6 |
| per Ferreum | 53 5 $\frac{1}{2}$ |
| Declin. per Armillas | 19 1 |
| | 19 1 $\frac{1}{2}$ |

DIE 25 JULIJ.

| | |
|------------------------|--------------------------|
| Alt. ☉ Mer. per Tych. | vet. 51 20 $\frac{1}{8}$ |
| | nouo 51 20 $\frac{1}{4}$ |
| per Volub. | 51 20 |
| per Ferreum | 51 19 $\frac{3}{4}$ |
| Declin. ☉ per Armillas | 17 15 $\frac{1}{2}$ |
| | 17 15 |

DIE 2 AUGUSTI.

| | | |
|----------------------|----|--------------------------------|
| Alt. ☉ per Q. Volub. | 49 | 3 |
| per Q. Ferreum | 49 | 2 ⁵ / ₆ |
| Declin. per Armillas | 14 | 57 ¹ / ₂ |
| | 14 | 58 |

DIE 5 AUGUSTI.

| | | |
|------------------------|----|-------------------------------|
| Alt. ☉ Mer. per Volub. | 48 | 8 |
| per Ferreum | 48 | 7 ¹ / ₂ |
| Declin. ☉ per Armillas | 14 | 1 ¹ / ₂ |
| | 14 | 1 ¹ / ₄ |

DIE 9 AUGUSTI.

| | | |
|-------------------------------|----|--------------------------------|
| Alt. ☉ Mer. per Tych., vtroq. | 46 | 50 ⁵ / ₆ |
| per Volub. | 46 | 50 ¹ / ₂ |
| per Ferreum | 46 | 50 |
| Declin. per Armillas | 12 | 45 |
| | 12 | 44 ³ / ₄ |

DIE 10 AUGUSTI.

| | | | | |
|------------------------|------|----|--------------------------------|----|
| Alt. ☉ Mer. per Tych. | nou. | 46 | 30 | 55 |
| | vet. | 46 | 31 | 0 |
| per Sext. | | 46 | 31 | |
| per Q. Volub. | | 46 | 30 ² / ₃ | |
| per Q. Ferreum | | 46 | 30 ¹ / ₂ | |
| Decl. per Armill. mai. | | 12 | 25 ¹ / ₂ | |
| | | 12 | 25 ¹ / ₄ | |

DIE 11 AUGUSTI.

| | | |
|--------------------------|----|--------------------------------|
| Alt. ☉ Mer. per Q. Tych. | 46 | 10 ¹ / ₄ |
| | 46 | 10 ² / ₃ |
| per Sext. | 46 | 10 ³ / ₄ |
| per Q. Volub. | 46 | 10 |
| per Q. Ferreum | 46 | 9 ³ / ₄ |
| Declin. ☉ per Armillas | 12 | 6 |
| | 12 | 5 ¹ / ₂ |

DIE 14 AUGUSTI.

| | | |
|------------------------------|----|-------------------------------|
| Alt. ☉ Mer. per Tych, vtroq. | 45 | 9 ¹ / ₂ |
| per Q. Chalyb. | 45 | 9 ¹ / ₄ |
| per Q. Volub. | 45 | 9 ¹ / ₄ |
| per Sext. nou. | 45 | 9 ⁵ / ₆ |
| Declin. per Armillas | 11 | 4 ¹ / ₂ |
| | 11 | 4 |

DIE 23 AUGUSTI.

| | | | |
|-----------------------|-----------|----|--------------------------------|
| Alt. ☉ Mer. per Tych. | vet. | 41 | 57 |
| | nouo pin. | 41 | 57 ¹ / ₆ |
| per Sext. | | 41 | 57 ¹ / ₃ |

DIE 28 AUGUSTI.

| | | |
|----------------------------|----|-------------------------------|
| Alt. ☉ Mer. per Q. Chalyb. | 40 | 5 ¹ / ₂ |
| per Q. Volub. | 40 | 5 ¹ / ₂ |

¹ Minuta defunt in codice.

| | | |
|------------------------|----|-------------------------------|
| per Q. Mural., vtroque | 40 | 5 ¹ / ₂ |
| per Sext. Trig. | 40 | 5 ¹ / ₂ |
| per Semicircul. Azim. | 40 | 5 |
| nondum satis correctum | | |
| Declin. per Armillas | 6 | 0 |
| bene | 6 | 0 ¹ / ₆ |

Erat bene admodum serenum.

DIE 1 SEPTEMBRIS.

| | | |
|-----------------------------|----|--------------------------------|
| Alt. ☉ Merid. per Chalyb. | 38 | 34 ¹ / ₂ |
| per Q. Volub. | 38 | 34 ¹ / ₂ |
| per Q. Mural. | 38 | 34 ³ / ₈ |
| | 38 | 34 ¹ / ₂ |
| per Sext. Trig. | 38 | 35 |
| Decl. per Armill., vno pin. | 4 | 29 |
| altero | 4 | 28 ¹ / ₂ |

DIE 6 SEPTEMBRIS.

| | | |
|-----------------------------|----|--------------------------------|
| Alt. ☉ Merid. per Q. Mural. | 36 | 39 ¹ / ₃ |
| per Sextant. | 36 | 39 ¹ / ₂ |
| per Volub. | 36 | 39 |
| per Q. Ferreum | 36 | 38 ³ / ₄ |
| Declin. per Armillas | 2 | 33 ¹ / ₂ |
| | 2 | 33 ¹ / ₄ |

DIE 7 SEPTEMBRIS.

| | | |
|------------------------------|----|--------------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 36 | 15 ¹ / ₂ |
| per Q. Volub. | 36 | 15 |
| Declin. per Armillas | 2 | 10 |
| | 2 | 9 ⁵ / ₆ |

DIE 8 SEPTEMBRIS.

| | | |
|------------------------------|----|--------------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 35 | 52 |
| per Q. Volub. | 35 | 51 ² / ₄ |
| Declin. ☉ | 1 | 46 ² / ₃ |
| | 1 | 47 |

Non satis ferenum.

DIE 12 SEPTEMBRIS.

| | | |
|-----------------------------|------|-----------------------------------|
| Alt. ☉ Merid. per Q. Volub. | 34 | 18 |
| per Q. Chalyb. | 34 | 17 ⁵ / ₆ |
| per Q. Tych. | vet. | 34 18 ¹ / ₂ |
| | nouo | 34 19 |
| per Sext. nouum | 34 | 18 ³ / ₄ |
| per Semicir. Azim. | 34 | 18 |
| Declin. per Armillas | | 0 12 ¹ / ₂ |
| | | 0 12 ² / ₃ |

DIE 25 SEPTEMBRIS.

| | |
|----------------------------|---------------------|
| Alt. Mer. per Q. Mural., | |
| vtroq. | 29 14 $\frac{1}{3}$ |
| per Sext. | 29 14 $\frac{1}{6}$ |
| per Volub. | 29 14 $\frac{3}{4}$ |
| per Chalyb. | 29 14 |
| Decl. per Armill. subterr. | 4 51 $\frac{1}{4}$ |
| | 4 51 $\frac{1}{2}$ |

DIE 5 OCTOBRIS.

| | |
|------------------------|---------------------|
| Alt. Merid. per Mural. | 25 26 $\frac{1}{2}$ |
| | 25 26 $\frac{3}{4}$ |
| per Sext. | 25 27 |

DIE 16 OCTOBRIS.

| | |
|------------------------|---------------------|
| Alt. Merid. per Mural. | 21 30 |
| | 21 30 $\frac{1}{3}$ |
| per Sextant. | 21 30 $\frac{2}{3}$ |

DIE 17 OCTOBRIS.

| | |
|------------------------------|---------------------|
| Alt. Mer. per Q. Tych., vet. | 21 10 |
| nouo | 21 10 $\frac{1}{3}$ |
| per Sext. nouum | 21 10 $\frac{1}{2}$ |
| per Volub. | 21 10 |
| Declin. per Armillas | 12 55 $\frac{1}{2}$ |
| | 12 55 $\frac{1}{4}$ |

DIE 19 OCTOBRIS.

| ☉ ab ortu | Decl. ☉ | Alt. ☉ |
|------------------------------|------------------------|--------|
| 26 0 | 13 22 $\frac{1}{2}$ M. | 2 55 |
| 26 55 | 13 24 $\frac{1}{2}$ | 3 21 |
| 30 20 | 13 26 $\frac{3}{4}$ | 4 43 |
| Alt. Mer. per Q. Tych., nouo | 20 30 | |
| vet. | 20 29 $\frac{5}{6}$ | |
| per Q. Volub. | 20 30 | |
| per Sext. nouum | 20 30 $\frac{1}{2}$ | |
| Declin. per Armillas | 13 36 | |

DIE 21 OCTOBRIS.

| | |
|------------------------------|---------------------|
| Alt. Mer. per Q. Tych., vet. | 19 50 $\frac{1}{6}$ |
| nouo | 19 50 $\frac{1}{4}$ |
| per Volub. | 19 50 $\frac{1}{4}$ |
| per Sext. nouum | 19 50 $\frac{1}{3}$ |
| Decl. per Armillas | 14 4 $\frac{1}{2}$ |
| | 14 4 $\frac{2}{3}$ |

DIE 26 OCTOBRIS A. M.

| | |
|------------------|---------------------|
| H. 8 38' Decl. ☉ | 15 41 |
| 8 40 | 15 41 $\frac{1}{2}$ |

| | | | |
|-------------|----------------------------------|--------|------|
| 8 50 | 15 43 | Alt. ☉ | 7 40 |
| 8 53 altero | 15 42 $\frac{3}{4}$ ¹ | | 7 50 |
| 11 39 vno | 15 48 $\frac{1}{2}$ | | |
| altero | 15 48 $\frac{1}{3}$ | | |

| | |
|------------------------------|----------|
| Circa Merid. Alt. per Volub. | 18 16 40 |
| per Mural. | 18 16 45 |
| per Sext. | 18 16 50 |
| per Semicirc. | 18 16 30 |

| | |
|---------------|--------------------------|
| 11 58 Decl. ☉ | vno 15 49 |
| | alt. 15 48 $\frac{5}{6}$ |

| | |
|----------------------|--------------------------|
| Decl. ☉ circa merid. | vno 15 49 |
| | alt. 15 48 $\frac{1}{3}$ |

| | |
|---------------------------|-------|
| Vera ☉ declin. in Meridie | 15 49 |
|---------------------------|-------|

Horologium emendabatur, apponebanturque pondera supremæ rotæ, idque hora ad solem 12 17 per Armillas.

H. 12 42 $\frac{1}{2}$ fuit Meridies in Horologio maiori quo hic antea vñ sumus; erat autem correctum hora 9 $\frac{1}{2}$, ergo intervallo 3 $\frac{1}{2}$ nimis cito mouebatur minutis 42 $\frac{1}{2}$.

DIE 27 OCTOBRIS.

| | |
|------------------------------|--|
| H. 7 33' 30" incepit ☉ oriri | |
| 7 36 29 medius ☉ oriebatur | |
| 7 40 15 ☉ totus est ortus. | |

DIE 6 NOUEMBRIS.

| | |
|--------------------------------|--|
| H. 7 56' 50" visus est ☉ oriri | |
| 7 59 0 Medius ☉ oriebatur | |
| 8 1 45 Totus ortus ☉ | |

Erant nubes paulo supra Solem.

Nota. Horologium in Meridie mox sequente mouebatur iusto citius minutis 16 $\frac{3}{4}$, qui error emendandus venit ab hora 6 $\frac{3}{4}$ quando emendabatur ad stellas.

| | |
|---------------------------------|------------------------|
| Alt. ☉ Merid. per Q. Volub. | 15 14 |
| per Chalyb. | 15 14 $\frac{1}{6}$ |
| post nouam diuisionem Chalybei. | |
| Decl. ☉ per Armillas | 18 51 $\frac{1}{3}$ M. |

DIE 25 NOUEMBRIS.

| | |
|--------------------------------|---------------------|
| Alt. ☉ Merid. per Q. Volub. | 11 40 $\frac{3}{4}$ |
| per Q. Ferreum | 11 41 $\frac{1}{2}$ |
| Nondum erat fatis verificatus. | |
| per Muralem | 11 39 $\frac{5}{6}$ |
| Declin. ☉ Merid. | 22 25 $\frac{1}{2}$ |

¹ Alias obseruationes declinationis Solis infra inter obseruationes Veneris inuenies.

DIE 5 DECEMBRIS.

| | |
|-----------------------------|---------------------|
| Alt. ☉ Merid. per Q. Volub. | 10 49 $\frac{1}{2}$ |
| per Q. Ferreum | 10 56 $\frac{1}{2}$ |
| per Q. Tych. | 10 49 $\frac{1}{2}$ |
| Declin. ☉ auf. | 23 16 |
| | 23 16 $\frac{1}{2}$ |

Horologium in meridie iusto citius mouebatur 8 $\frac{1}{2}$ ' ab hora 5 matutina, qua corrigebatur ad stellas.

DIE 6 DECEMBRIS.

| Tempus | Alt. ☉ | Azim. ☉ a mer. ad ort. | Declin. ☉ |
|--------------------|--------|------------------------|---------------------|
| 9 20 $\frac{1}{2}$ | 3 33 | vno | 23 10 $\frac{1}{2}$ |
| 9 23 $\frac{1}{2}$ | 3 56 | altero | 23 11 |
| 9 28 $\frac{1}{2}$ | 4 21 | | 23 12 $\frac{1}{2}$ |
| 9 45 $\frac{1}{2}$ | 5 32 | 31 24 | 23 15 $\frac{1}{2}$ |
| 9 56 | 6 18 | 29 5 | 23 15 |
| 9 58 | 6 26 | 28 40 | 23 17 $\frac{1}{2}$ |

Nota. Horologium in Meridie mox sequente saltem 4 scrupulis primis iusto celerius mouebatur, qui error illi ab hora 5 $\frac{1}{2}$ matutina, qua corrigebatur, imputandus venit, atque hinc rectificari possunt antecedentia tempora.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 10 46 $\frac{1}{2}$ |
| per Volub. | 10 45 $\frac{1}{2}$ |
| Declin. ☉ per Armillas | 23 18 $\frac{1}{2}$ |
| | 23 19 |

DIE 7 DECEMBRIS.

Horologium emendabatur mane hora 5 $\frac{1}{2}$.

| | |
|--------------------------|----------------------------|
| H. 8 M. 30 $\frac{1}{2}$ | incipiebat ☉ oriri |
| 8 34 $\frac{1}{2}$ | videbatur dimidium ☉ |
| 8 36 $\frac{1}{2}$ | ☉ totus apparebat exortus. |

DIE 14 DECEMBRIS.

| | |
|----------------------------|---------------------|
| Alt. ☉ Merid. per Q. Tych. | 10 41 $\frac{1}{2}$ |
| per Q. Chalyb. | 10 44 |
| per Q. Volub. lign. | 10 42 $\frac{1}{2}$ |
| Declin. ☉ per Armillas | 23 23 |
| | 23 22 $\frac{2}{3}$ |
| Declin. repetita | 23 23 |
| | 23 22 $\frac{1}{2}$ |

Non erat satis ferenum.

DIE 15 DECEMBRIS.

| Tempus | Alt. ☉ | Azim. ☉ | Declin. ☉ |
|--------------------|--------|---------|---------------------|
| 9 17 $\frac{1}{2}$ | 3 52 | 36 1 | 23 15 |
| 9 22 | 4 19 | 34 59 | 23 15 $\frac{1}{2}$ |
| 9 26 | 4 37 | 34 11 | 23 15 $\frac{1}{2}$ |
| | | | alt. 23 16 |

| | | | |
|---------------------|------|-------|--------------------------|
| 9 32 $\frac{2}{3}$ | 5 6 | 32 36 | 23 17 |
| | | | alt. 23 16 $\frac{1}{2}$ |
| 9 43 $\frac{5}{6}$ | 5 57 | 30 10 | 23 17 $\frac{1}{2}$ |
| 9 51 $\frac{1}{2}$ | 6 26 | 28 32 | 23 17 $\frac{1}{2}$ |
| 10 0 | 7 0 | 26 34 | 23 18 |
| 10 4 $\frac{2}{3}$ | 7 18 | 25 38 | 23 18 $\frac{1}{2}$ |
| 10 8 | 7 30 | 24 46 | 23 19 |
| 10 22 $\frac{1}{6}$ | | | 23 19 $\frac{1}{2}$ |
| 10 55 $\frac{1}{6}$ | 9 43 | 13 53 | 23 20 |

Horologium in Meridie mouebatur iusto tardius circa 7 Minut. qui error illi accebit ab Hora 5 $\frac{1}{2}$ huius diej antemerid. qua horologium rectificabatur.

| | |
|-----------------------------|---------------------|
| Alt. ☉ Merid. per Q. Volub. | 10 43 $\frac{2}{3}$ |
| per Q. Chalyb. | 10 45 |
| Decl. ☉ per Armillas | 23 21 |
| | 23 21 $\frac{1}{6}$ |

DIE 16 DECEMBRIS.

H. 6 $\frac{1}{2}$ verificabatur Horologium 8 25 $\frac{2}{3}$ ☉ incipiebat oriri.

Medium & finis non poterant conspici propter nubes.

| | |
|------------------------------|----------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 10 47 $\frac{1}{2}$ |
| per Volub. | 10 46 $\frac{2}{3}$ |
| Declin. per Armillas | 23 18 |
| | altero 23 18 $\frac{1}{6}$ |

Nota. ☉ in Meridie 8 minutis iusto tardius mouebatur, qui error illi ab hora 6 $\frac{1}{2}$ irrepsit.

DIE 22 DECEMBRIS.

| | Alt. ☉ | Azim. ☉ | Declin. ☉ |
|--------------------|--------|---------|---------------------|
| 9 50 $\frac{1}{2}$ | 6 40 | 29 11 | 22 55 |
| 9 54 $\frac{1}{6}$ | 6 55 | 28 20 | 22 54 $\frac{2}{3}$ |
| 10 7 $\frac{1}{2}$ | 7 42 | 25 35 | 22 55 $\frac{1}{2}$ |

Horologium in Meridie 4 $\frac{1}{2}$ ' iusto citius mouebatur, fuit autem Hora 9 antemerid. mediocriter correctum ad Solem.

| | |
|------------------------------|--------------------------|
| Alt. ☉ Merid. per Q. Chalyb. | 11 9 $\frac{1}{2}$ |
| per Q. Volub. | 11 8 $\frac{3}{4}$ |
| per Q. Mural. | 11 8 $\frac{1}{8}$ |
| Declin. ☉ | 22 56 $\frac{1}{6}$ |
| | alt. 22 56 $\frac{2}{3}$ |

DIE 26 DECEMBRIS.

Horologium emendabatur ad Spicam hora 7 $\frac{1}{4}$.

H. 8 27'10" vifus est ☉ oriri

8 29 58 Medius

8 32 20 Totus ortus

Secundum calculum oriretur ☉ H. 8 32'.

| Tempus | Alt. ☉ | Azim. ☉ | Decl. ☉ |
|--------------------|--------|---------|---------------------|
| 8 55 | 2 0 | 42 53 | 22 21 $\frac{1}{2}$ |
| 8 56 $\frac{1}{8}$ | 2 6 | 42 36 | 22 22 |
| 8 57 $\frac{2}{3}$ | 2 16 | 42 15 | 22 22 |
| 8 59 $\frac{1}{2}$ | 2 22 | 42 2 | 22 22 $\frac{2}{3}$ |
| 9 1 $\frac{1}{3}$ | 2 33 | 41 38 | 22 23 |
| 9 3 | 2 44 | 41 12 | 22 24 |
| 9 4 $\frac{1}{2}$ | 2 51 | 40 55 | 22 24 $\frac{1}{3}$ |

DIE 28 DECEMBRIS.

H. 8 21'20" oriebatur supremum ☉

8 23 40 medium oriebatur

8 25 50 totus ortus

| | Alt. ☉ | Azim. ☉ | Decl. ☉ |
|----------------------------|--------|---------|---------------------|
| 9 5 | 3 25 | 40 8 | 22 12 |
| 9 8 | 3 42 | 39 30 | 22 12 |
| 9 13 | 4 4 | 38 25 | 22 12 $\frac{1}{2}$ |
| Alt. ☉ Mer. per Q. Chalyb. | | | 11 48 fere |
| per Sext. | | | 11 47 $\frac{5}{8}$ |
| per Volub. | | | 11 47 |
| per Mural. | | | 11 47 |
| Declin. ☉ per Armillas | | | 22 17 $\frac{1}{2}$ |
| | | | altero 22 18 |

LOCA SOLIS.

| Die | Alt. ☉ observ. | Parall. | Vera Alt. | Decl. ☉ | Long. ☉ | Ephemerides nostræ | |
|----------|----------------------|---------|----------------------|--------------------|--------------------------|---|---|
| 19 Feb. | 26 19 5 26 18 50 | 2 40 | 26 21 45 26 21 30 | 7 43 15 7 43 30 | 10 19 29) 10 18 44) | 10 13 57 <i>Sed refractio Solis adhuc in causa est</i> | Mæst. 9 41 0 |
| 27 Mart. | 40 41 30 40 41 20 | 2 14 | 40 43 44 40 43 34 | 6 38 44 6 38 34 | 16 51 34 ✓ 16 51 5 ✓ | 16 52 0 | Mæst. 16 23 0 Cyp. 17 4 12 Mæst. 1 5 0 |
| 14 Aug. | 45 9 30 45 9 15 | 2 6 | 45 11 36 45 11 21 | 11 6 36 11 6 21 | 1 7 22 m 1 8 0 m | 1 8 51 | |

OBSERVATIONES LUNÆ.

DIE 25 FEBRUARIJ.

N.B.¹ Sequens observatio in ☾ facta est in principio ☾ non longe a latitudine maxima meridionali. Quare utilis est in examinanda ☾ latitudine & paralaxi.

Altitudo centri meridiana 51° 50' 15"
Long. ☾ in 1° 9' 6"

Declinatio nostræ 23 31 15

Ebet alt. æquat. 28 19 0

quæ tamen est 34 5 $\frac{1}{2}$

Latitudo ☾ visa 5 46 $\frac{1}{2}$ M.

At vera erat nostræ 5 9 0

Ergo Paralaxis quæfita 37 $\frac{1}{2}$

¹ E codice V, usque ad »quæ adhuc nimia videtur«.

Aliter

| | |
|------------------------------------|-------------|
| <i>Altitudo</i> ☾ <i>obseruata</i> | 51° 50' 15" |
| <i>Altitudo æquatoris</i> | 34 5 30 |
| <i>Dist. ab æquatore</i> | 17 44 45 |
| <i>Declin. ☾ absque lat.</i> | 23 31 15 |
| <i>Latitudo ☾ visa</i> | 5 46 30 |
| <i>At vera ex nostra</i> | 5 9 0 |
| <i>Paralaxis ☾</i> | 37 30 |

quæ adhuc nimia videtur

N.B. ☾ erat iuxta initium ♄ & habuit fere latitudinem maximam.

H. 7 M. 2 fuit ☾ in 90 Gr. Asc. iuxta supputationem, eratque quasi ☾ remotissima a terris.

Obseruatio ☾.

H. 6 42' erat in merid. 4 vel 3⁵/₆ Grad. ♄, ☾ ab oculo ☾

Declin. super. cornu ☾ 18 1

6 47' 20" Occ. limb. ☾ ab oc. ☾ 26 38¹/₄

6 52 42 transiit ☾ per merid., alt. sup. cornu per Volub. 52 5

inferioris 51 35

per Chalyb. 52 5¹/₂

51 35¹/₂

6 54³/₈ Dist. occ. limb. ab oc. ☾ 26 40

| | <i>Dist. occ. limbi ab oculo ☾</i> | <i>Declinatio super. cornu</i> | <i>infer. cornu</i> |
|----------------------------------|------------------------------------|----------------------------------|-----------------------------------|
| 6 57 ¹ / ₂ | 26 41 | 18 0 ¹ / ₂ | |
| 7 2 | 26 42 ¹ / ₃ | 18 0 ¹ / ₂ | |
| 7 5 35" | 26 45 | 18 0 ² / ₃ | 17 31 |
| 7 8 ³ / ₄ | 26 45 ¹ / ₂ | 18 0 ² / ₃ | 17 30 ³ / ₄ |
| 7 11 40 | 26 46 | 18 0 ³ / ₄ | 17 30 ³ / ₄ |
| 7 14 | 26 47 | 18 0 ³ / ₄ | 17 31 |
| 7 16 ¹ / ₂ | 26 47 ³ / ₄ | 18 1 | 17 31 |
| 7 19 | 26 47 ³ / ₄ | 18 1 | 17 31 |

Denuo obseruabatur ☾ pro parallaxi sua constituenda

| | <i>Inter occ. limb. ☾ & cor ☾</i> | <i>Alt. super. cornu ☾</i> | <i>Declin. sup. cornu</i> | <i>infer. cornu</i> |
|-----------------------------------|---------------------------------------|----------------------------|-----------------------------------|-----------------------------------|
| 10 23 | 52 10 ³ / ₄ | 36 14 | 17 59 ¹ / ₂ | 17 28 ¹ / ₆ |
| 10 27 | 52 9 ¹ / ₂ | 35 40 | | |
| 10 30 ¹ / ₂ | 52 8 ¹ / ₄ | 35 17 | 17 59 | |
| 10 35 12" | | | | <i>Transiit Merid. cor ☾</i> |
| 10 45 44 | | | | <i>Transiit luc. ceruicis ☾.</i> |

Hinc potest horologium corrigi & conferri cum transitu priorum fixarum & ♄.

N.B. Tempora assignata sunt verificata.

DIE 27 FEBRUARIJ.

Sequitur obseruatio ☾ iuxta 90 gradum.

H. 8 30' 4" Transiit occ. limb. ☾ per Merid. habuitque altit.

per Volub. super. limb. 50 31 infer. 50 0

per Chalub. super. 50 31 infer. 50 0¹/₆

Declin. per Armillas 16 28 15 55

Declin. centri ☾ 16 11

Declin. ex altit. 16 10¹/₂

Distantiaper Sextantem

8 39 Inter Aldeb. & occ.

limb. ☾ 52 3¹/₂

Declin. super. cornu 16 26

| | <i>In merid. ☾</i> | <i>Inter. Aldeb. & occ. limb. ☾</i> | <i>super. cornu</i> | <i>Declin. infer. cornu</i> |
|----------------------------------|-------------------------------|---|-----------------------------------|-----------------------------------|
| 8 44 | | 52 4 | 16 25 | 15 53 ¹ / ₂ |
| 8 51 ¹ / ₂ | 0 ¹ / ₄ | 52 6 ¹ / ₄ | 16 24 | |
| 8 57 ³ / ₄ | 1 45 | 52 8 | 16 23 ¹ / ₆ | 15 53 |
| 9 7 | | 52 10 ¹ / ₂ | 16 22 ¹ / ₂ | 15 53 |

Inter cor ☾

& occ. limb. ☾

| | | | | |
|----------------------------------|--------------------------------|-----------------------------------|-----------------------------------|-------|
| 9 13 ¹ / ₄ | 5 ¹ / ₂ | 28 5 ¹ / ₂ | 16 22 ¹ / ₆ | 15 53 |
| 9 17 ² / ₃ | 6 35 | 28 4 | 16 21 ¹ / ₂ | 15 51 |
| 9 23 | | 28 2 ¹ / ₂ | | |
| 9 26 ¹ / ₆ | 8 40 | 28 1 ¹ / ₄ | | |
| 9 29 ¹ / ₂ | 9 ¹ / ₂ | 28 0 | | |
| 9 32 ¹ / ₂ | 10 ¹ / ₆ | 27 58 ¹ / ₂ | 16 21 | 15 51 |
| | | <i>Ab oculo ☾</i> | | |
| 9 36 | 11 5 | 52 24 | 16 20 | 15 50 |
| 9 39 | | 52 25 | | |
| 9 41 ¹ / ₆ | 12 25 | 52 25 | 16 20 | 15 50 |

A corde ☾

| | | | | |
|----------------------------------|--------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 9 45 ¹ / ₂ | 13 30 | 27 51 ³ / ₄ | 16 20 | |
| 9 49 ¹ / ₆ | 14 25 | 27 51 | 16 19 ¹ / ₂ | 15 48 ¹ / ₂ |
| 9 52 ¹ / ₆ | 15 10 | 27 50 | 16 18 ¹ / ₂ | 15 48 ¹ / ₂ |
| 9 56 ¹ / ₂ | 16 15 | 27 49 | 16 18 ¹ / ₂ | 15 48 ¹ / ₂ |
| 9 58 ¹ / ₂ | 16 ³ / ₄ | 27 48 ¹ / ₂ | 16 18 | 15 48 ¹ / ₂ |
| 10 1 ¹ / ₂ | 17 ¹ / ₂ | 27 48 | 16 17 | 15 48 |

N.B. Omnes hæ obseruationes in ☾ erant satis bonæ, quibus potes tuto te fundare & conferre cum ijs, quæ ante biduum accipiebantur, quæ etiam erant satis exquisitæ.

Tempor. assignata sunt etiam correctæ.

DIE 28 FEBRUARIJ.

H. 10 46' P. M. ☾ in 90 Gr. ab Asc. iuxta calculum.

H. 9 $\frac{1}{2}$ Horologium a transitu ♄ per Merid. verificatum est: Differentia transitus inter occ. limbum ☾ & ♄ fuit 50''; inter orientalem partem ☾ & ♄ erat differentia transitus in tempore etiam 50'' secundorum.

Alt. super. limbi ☾ in Merid. per Q. Volub. 48 21
infer. limbi per Q. Volub. 47 49

H. 10 22' 57'' transiit cor ♄ per Merid. Hinc et ex Azim. & Alt. Arcturi tempora sequentia sunt verificata.

Obseruatio ☾ appropinquantis 90 Gr.

| Tempus | Inter occ. limb. ☾ & infer. caput II | Declinatio Bor. super. limbi | infer. limbi | Azim. or. | Arcturi Altit. |
|-------------------------------|---|---------------------------------|---------------------|-----------|---------------------|
| H. 10 30' 13'' | 24 41 $\frac{1}{2}$ | 14 10 | 13 37 $\frac{1}{2}$ | 78 20 | 33 37 $\frac{1}{2}$ |
| 10 36 35 | 24 43 | 14 9 $\frac{1}{2}$ | 13 37 | 76 55 | 34 30 $\frac{1}{2}$ |
| 10 40 $\frac{1}{6}$ | 24 45 $\frac{1}{6}$ | 14 9 $\frac{1}{3}$ | | 75 57 | 34 53 |
| 10 43 $\frac{1}{4}$ | 24 46 $\frac{1}{4}$ | 14 9 | | 75 35 | 35 18 |
| Inter occ. limb. ☾ & cor ♄ | | | | | |
| 10 49 | 14 51 $\frac{1}{6}$ | 14 8 $\frac{1}{2}$ | | 74 2 | 36 8 |
| 10 51 | 14 49 | 14 8 | | 73 31 | 36 26 $\frac{1}{2}$ |
| 10 53 40 | 14 47 fere | 14 7 | | 72 57 | 36 49 |
| 10 56 40 | 14 45 $\frac{5}{6}$ | 14 6 $\frac{1}{2}$ | 13 35 | 72 0 | 37 12 $\frac{1}{2}$ |

N. B. Tempora obseruationibus ☾ assignata sunt verificata.

DIE 29 FEBRUARIJ.

H. 12 7' P. M. ☾ in 90 Gr. iuxta supputationem.

10 23 20'' transiit occ. limbus ☾ per Merid., habens altitudinem super. cornu 45 21, infer. 44 50.

| Tempus | Inter occ. limb. ☾ & infer. caput II | Declinatio Bor. super. limbi | infer. limbi | Azim. or. | Arcturi Altit. |
|---------------------------------|---|--|---------------------|-----------|---------------------|
| 11 26 | 37 3 | } inter nubes. N. B. In sequentibus erat ferentius | | | |
| 11 29 | 37 3 $\frac{3}{4}$ | | | | |
| 11 29 30 | 37 4 | | | | |
| 11 33 44 | 37 5 $\frac{1}{2}$ | 11 7 $\frac{1}{2}$ | 10 36 | 62 57 | 41 56 $\frac{1}{2}$ |
| 11 36 44 | 37 8 | 11 7 | 10 35 $\frac{1}{2}$ | 61 42 | 42 27 $\frac{1}{2}$ |
| 11 40 | 37 11 | 11 7 | | 60 46 | 42 56 |
| Inter occ. limb. & Spicam III | | | | | |
| 11 53 | 54 29 $\frac{3}{4}$ | 11 5 $\frac{1}{6}$ | 10 33 $\frac{1}{2}$ | 59 7 | 43 42 $\frac{1}{2}$ |
| 11 55 | 54 28 $\frac{1}{2}$ | | | 57 5 | 44 34 |
| 11 57 40 | 54 26 | | | 56 1 | 44 57 $\frac{1}{2}$ |
| Inter occ. limb. & inf. cap. II | | | | | |
| 12 3 | 37 17 | 11 3 | | 55 19 | 45 20 $\frac{1}{2}$ |
| 12 6 $\frac{1}{2}$ | 37 19 | 11 2 | 10 31 $\frac{1}{3}$ | 53 57 | 45 53 |
| Inter occ. limb. & Spicam | | | | | |
| 12 9 12 | 54 21 | | | 51 45 | 46 38 |
| 12 12 23 | 54 19 | | | | 46 59 |

DIE 1 MARTIJ, P. M.

H. 1 21' P. M. N. ☾ in 90 Gr. Ascend. iuxta computum.

9 7 25'' Transiit occ. limbus ☾ per merid. & fuit altitudo
superioris limbi per Volub. 41 37 per Chalyb. 41 37 $\frac{5}{6}$
inferioris 41 4 41 7 $\frac{1}{6}$

| Tempus | Inter cor ☉ & occ. limb. ☾ per Sext. Δ | Declinatio per Arm. super. limbi infer. limbi | Cor ☉ occ. | Spica or. |
|---------------------------|---|---|---------------------|-----------|
| H. 12 50' 3" | 13 40 $\frac{3}{4}$ | 7 14 $\frac{1}{2}$ | 39 12 | |
| 12 53 30 | 13 42 | 7 13 $\frac{1}{2}$ | 6 39 | |
| 12 58 30 | 13 43 $\frac{1}{2}$ | | 40 31 $\frac{1}{2}$ | |
| Inter Spicam & occ. limb. | | | | |
| 1 1 0 | 40 28 $\frac{1}{2}$ | 7 11 | | 8 4 |
| 1 5 14 | 40 27 | 7 9 | | 7 7 |
| Inter cor ☉ & occ. limb. | | | | |
| 1 27 0 | 13 59 $\frac{1}{2}$ | 7 8 | 47 51 | |
| 1 30 2 | 14 0 $\frac{1}{2}$ | 7 6 $\frac{1}{2}$ | 48 25 $\frac{1}{2}$ | |
| 1 34 4 | 14 2 | | 49 24 | |
| Inter Spicam & occ. limb. | | | | |
| 1 36 6 | 40 14 $\frac{1}{4}$ | 6 34 | | |
| 1 39 | 40 12 | | | 1 21 |

Inter nubes subinde recurrentes factæ sunt hæc observationes. Tempora aBignata sunt verificata.

DIE 2 MARTIJ — ECLIPSIS LUNÆ.

Vesper ante Eclipsin & sequentes observationes & per Armillas maiores rectificatas.

| Tempus | | Canis | Occ. | Dist. | Declin. | | Alt. |
|----------------------------------|-------------|------------------------------------|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
| Horol. | verificatum | minor | limb. ☾ | æquat. | super. limb. | infer. | sup. limbi |
| 8 30 ¹ / ₈ | 8 30 30 | 101 21 ¹ / ₄ | 40 52 ¹ / ₂ | 60 29 | 3 53 B. | | 24 50 |
| 8 33 50 | 8 34 0 | 102 13 ¹ / ₄ | 41 42 ¹ / ₈ | 60 31 | 3 52 ¹ / ₂ | | 25 13 |
| 8 36 45 | 8 37 4 | 102 59 | 42 28 ¹ / ₃ | 60 31 | 3 51 ¹ / ₂ | 3 18 | 25 32 |
| 8 40 45 | 8 40 57 | 103 57 ¹ / ₂ | 43 24 | 60 33 ¹ / ₂ | 3 50 | 3 17 | 25 57 |
| 8 44 ¹ / ₂ | 8 44 40 | 104 53 ¹ / ₄ | 44 17 | 60 36 ¹ / ₄ | 3 48 ¹ / ₂ | 3 15 ¹ / ₂ | 26 20 ¹ / ₃ |
| 8 47 52 | 8 47 56 | 105 44 | 45 7 ¹ / ₄ | 60 36 ³ / ₄ | 3 47 ¹ / ₂ | 3 15 | |
| 8 54 ¹ / ₆ | 8 54 0 | 107 10 ¹ / ₂ | 46 30 ⁵ / ₆ | 60 39 ² / ₅ | 3 46 | 3 13 ² / ₃ | |

N. B. ☾ erat in rariusculis nubibus & magnus halo circa ipsam.

11 53 $\frac{1}{2}$ Transiit ☾ quoad orientalem limbum per Merid. habuitque
 altitudinem per Volubilem per Chalyb. per Muralem
 superioris limbi 37 14 37 18 37 19 $\frac{1}{8}$
 inferioris 36 48 36 47 36 47
 11 57 $\frac{1}{2}$ Fuit Declin. super. limbi ☾ 3 12 $\frac{3}{4}$, inferioris 2 42, diameter 0 30 $\frac{1}{8}$.

| Tempus | | | Declin. | | | Inter occ. | Arcturus | Alt. | Azim. limbi |
|---------------------|-------------|-------------------|--------------------|----------------------|--|---------------------|------------|---------------------|-------------|
| Horol. | verificatum | super. limbi | infer. | limb. | | limb. | a merid. | super. | occ. a Mer. |
| | | | | ☾ & ☿ | | | verf. ort. | limbi | verf. occ. |
| 12 17 $\frac{2}{3}$ | 12 16 28 | 3 9 | 2 37 $\frac{1}{2}$ | 43 9 | | | 31 46 | 37 1 | 7 2 |
| 12 23 $\frac{2}{3}$ | 12 22 | 3 7 $\frac{3}{4}$ | 2 37 | 43 11 $\frac{1}{4}$ | | | | 36 52 | 8 42 |
| 12 30 55 | 12 29 30 | 3 6 $\frac{1}{2}$ | 2 35 | 43 14 $\frac{1}{2}$ | | | 28 30 | | |
| | | | | Occ. limb. ☾ | | Arcturus | | Dist. | |
| | | | | ab ortu | | ab ortu | | æquat. | |
| 12 36 55 | 12 35 10 | 3 5 $\frac{1}{4}$ | | 100 28 $\frac{3}{4}$ | | 62 57 $\frac{2}{3}$ | | 37 31 | |
| 12 40 30 | 12 38 49 | 3 5 | | 101 21 | | 63 50 | | 37 31 | |
| 12 44 $\frac{1}{4}$ | 12 42 42 | | | 102 17 | | 64 48 $\frac{1}{2}$ | | 37 28 $\frac{1}{2}$ | |
| 12 50 $\frac{2}{3}$ | 12 50 20 | | | 104 8 $\frac{3}{4}$ | | 66 43 | | 37 25 $\frac{3}{4}$ | |
| | 12 53 30 | 3 3 | | | | | | | |

1 12 30 1 13 9¹ *Prima animadversio. ☾ videbatur aliquantulum deficere.*

Arcturus ab ortu

72 26 $\frac{1}{2}$

1 18 57 1 19 73 56 $\frac{1}{2}$

1 23 5 1 23 11 75 0 *Quasi sexta pars aberat de ☾*

1 25 $\frac{3}{4}$ 1 25 55 75 40 *Fuit quasi quarta pars offuscata*

1 30 $\frac{1}{4}$ 1 30 22 76 47 $\frac{1}{2}$ *Quasi tertia pars ☾ aberat*

1 38 1 38 6 78 43 *luna media laborauit in vmbra, quantum videre licuit.*

1 49 1 49 11 81 30 *Tertia pars residua*

1 52 $\frac{1}{4}$ *Declin. super. limbi ☾ 2 52 inferioris limbi 2 27*

1 54 $\frac{5}{6}$ 1 54 56 82 59 *Quarta pars residua.*

1 56 $\frac{1}{2}$ *distabat ☾ occ. limbus a corde ☾ 27 44.*

*Arcturus
ab ortu*

*Declin.
super. limbi*

infer.

☾ a Spica

1 59 $\frac{1}{2}$ 1 59 40 84 9 $\frac{1}{2}$ 2 49 $\frac{1}{2}$ 2 24

2 4 2 49 2 26

2 49 2 28 26 17 $\frac{1}{2}$ *Quasi sexta pars restabat*

2 7 $\frac{1}{2}$ 2 7 44 86 11 $\frac{1}{2}$ 2 48 2 33 26 15

2 11 $\frac{1}{2}$ 2 11 43 87 8 $\frac{1}{2}$ 2 47 2 35 $\frac{1}{2}$ ☾ a corde ☾

2 15 2 15 19 88 2 27 54 $\frac{5}{6}$

27 57

2 20 $\frac{5}{6}$ 2 21 25 *Decl. Medij de ☾ parte lucid. 2 45 $\frac{1}{2}$*
Videbatur tota ☾ vmbrae immersa vel potius vno minuto ante. Spica 102 50 fere².

2 26 *Decl. sup. limb. 2 44 $\frac{1}{2}$, inferior videri non potuit.*

Spica & occ. limb. ☾ 26 2 $\frac{1}{2}$.

*Spica
ab ortu*

*Decl. super.
limbi*

*☾ occ. limb.
a Spica*

2 29 $\frac{1}{6}$ 2 30 3 2 41 26 2

2 32 $\frac{1}{6}$ 2 33 13 105 47 2 40 25 59

2 35 2 35 53 106 26 $\frac{1}{2}$ 2 38 $\frac{1}{2}$ 25 57

2 39 2 39 57 107 28 2 38 a corde ☾

2 42 $\frac{1}{6}$ 2 43 1 2 38 circiter 28 1

2 45 $\frac{3}{4}$ 2 46 31 109 9 2 37 28 5

2 49 $\frac{1}{2}$ 2 51 13 110 8 $\frac{3}{4}$ 2 38 28 8

2 56 $\frac{3}{4}$ 2 57 33 111 55 2 41 28 9 forte dubia

3 3 28 15

N.B. Iam præterijt medium, quia ☾ erat lucidior versus ortum. Hoc tempus est incertum, non tamen potest vnus minuti esse plus vel minus.

H. 3 8' fuit declin. super. limbi 2 39.

Nota. Posteriores obseruationes in ☾ sunt sumptæ ab ipsius orientali limbo, quia is succeßiue fiebat lucidior & obscurabatur occidentalis.

¹ Adscriptum est in codice V.: »Addatur hic vbique temporibus dimidium vnus minuti pro correctione circuli æquatorij, alias tempora sunt correctissima«.

² Adscripsit Tycho postea: ☾ ingrediebatur 2^H 20^M
egrediebatur 3 44

3 14 $\frac{1}{2}$ ¹ ☾ & ceruix ☾ 30 32

| | | Spica | Decl. super. limbi | Or. limb. ☾ & cor. ☾ |
|---------------------------------|---------|--|---------------------------|-------------------------|
| 3 18 | 3 18 57 | 117 12 $\frac{3}{4}$ | 2 39 | 28 57 |
| 3 21 | | 118 2 $\frac{1}{4}$ | 2 39 | 28 58 $\frac{3}{4}$ |
| 3 25 $\frac{1}{2}$ ² | 3 26 57 | 119 17 | 2 41 | 29 3 $\frac{1}{2}$ |
| | | | Or. limb. & Spica | |
| 3 32 $\frac{1}{3}$ | | | 2 37 | 24 57 $\frac{1}{2}$ |
| 3 39 | 3 40 5 | 122 35 | 2 35 $\frac{1}{2}$ | 24 55 $\frac{1}{2}$ |
| 3 43 | 3 43 45 | 123 30 | Incepit ☾ egredi ex vmbra | |
| 3 47 $\frac{1}{2}$ | | fuit Arcturus P. 111 22' ab ortu pro corrigendo horologio. Tempus respondet 3 ^H 48' 31". Si ponas primum totalem ingreßum H. 2 19' & egreßum H. 3 43', insensibiliter aberrabis. | | |
| 3 53 | 3 53 59 | Tunc quasi octaua pars ☾ erat vmbram egreßa. Arcturus 112 44. | | |
| 3 55 $\frac{1}{2}$ | | Fuit alt. super. cornu ☾ 18 48. | | |
| 3 59 | 3 59 51 | ☾ recuperauit quasi sexta parte lumen. | | |
| 4 19 $\frac{2}{3}$ | 4 20 31 | Luna proxime media recuperauit lumen. Arcturus ab ortu 119 25. | | |
| 4 21 | 4 21 59 | Primum Aurora visa est, cum Arcturus abeßet 119 $\frac{3}{4}$ ab ortu. Potes ponere primum initium auroræ H. 4 20, correcto tempore Horologij ad transitum Arcturi. | | |
| 4 27 $\frac{1}{2}$ | 4 28 43 | Recuperauit luna lumen, quasi per duas tertias totius corporis. Arcturus 121 27 orient. | | |
| 4 35 | 4 36 10 | Arcturus 123 18. Luna tunc saltem quarta sui parte videbatur laborare in tenebris. Ita vt $\frac{3}{4}$ eßet illuminata, quantum videre licuit per nubeculas interpositas, per quas ☾ corpus in fine totius durationis apparuit. | | |
| 4 45 | | Aliquid adhuc desiderabatur, sed non admodum multum, ☾ erat in nubibus, ideoque id non bene discerni poterat. | | |

Ab initio & in medio erat satis serenum, vsque ad totalem egreßionem & paulo post. Suntque hæ omnes obseruationes satis bonæ & certæ, quibus lunaris cursus reßitutio tuto fundari potest.

Per æßtimationem & quantum per denßiores nubes videri potuit, conijciendo quod æquale lumen vndique spargeret, fuit iuxta H. 4 M. 50 tota plena.

| | | | | | |
|------|---------|------------------|----------|----------------|---------|
| H. 4 | 3' 39" | Arcturus ab ortu | 115° 27' | respondet H. 4 | 4' 51" |
| | 4 5 0 | | 115 47 | | 4 6 11 |
| | 4 5 42 | | 115 57 | | 4 6 51 |
| | 4 54 10 | | 128 9 | | 4 55 23 |
| | 4 55 6 | | 128 20 | | 4 56 11 |
| | 4 55 50 | | 128 33 | | 4 57 3 |

¹ Adscriptum est: hoc tempus non habet Iohannes.

² Adscriptum est: Non habet Iohannes.

IN OBSERVATORIO AUSTRALI.

Tempus Horol. \mathcal{N} a merid. occ. Verum tempus
 H. 1 15' 27'' H. 4 5 $\frac{1}{2}$ 1 15 $\frac{1}{2}$

Tuncque sensibilibiter apparebat ζ vmbram terræ ingredi.



1 21 18 4 11 35

1 21 35 atque visa est tunc quasi quinta pars ζ semidiametri obscurata.



1 27 40 4 18

1 28 Tuncque quasi paulo plus tertia parte semidiametri ζ decessisse videbatur.



1 37 33 4 27 40

1 37 40 Iamque paulo plus tertia quasi parte totius ζ in vmbra versari apparebat.



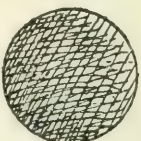
1 45 10 4 35 $\frac{1}{2}$

1 45 $\frac{1}{2}$ ζ Media immergi visa est.



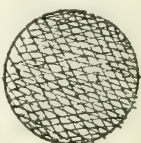
2 30 49 Cor Ω occ.
4 18

2 31 15 ζ penitus immersa in vmbra videbatur (*iusto tardius*)¹.



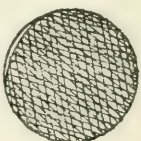
3 40 38 Cauda Ω occ.
3 46 $\frac{1}{2}$

3 41 6 ζ iam altera parte lucidior quæ mox emersura ex vmbra apparebat.



3 46 37 3 52 40

3 47 16 Atque tunc ζ sensibilibiter egredi vmbra videbatur.



¹ Postea adscripsit Tycho.

IN OBSERVATORIO BOREALI.

I. Principium ingreßus ☾ in vmbra. Tempus per Armillas
ex tempore transitus ♄ per Mer. & distantia æquatoria col-
lectum H. 13 M. 17.0 Ergo inceptet H. 1 M. 12¹

Tempus Ex remotione ♄
ex Horol. a mer. in dist. æquat.
. . . 13 21

Inceptet H. 1 12

. . . 13 24 0

Inceptet 1 9

1 28 4 13 28

Inceptet 1 8

1 34 10 13 34 30

1 45 22

II. Videbatur media pars ☾ obscurata
Inceptet 1 14

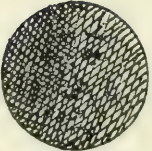
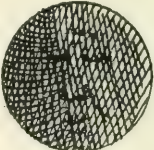
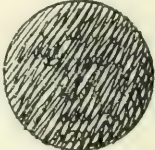
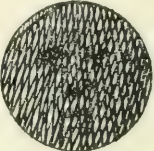
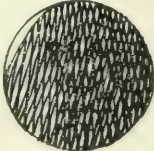

1 48 55 13 48 30

. . .

Tempus habere non potui, fuit tamen circa me-
dium, vt opinor, præcedentis & sequentis proxime
eclipseos ☾.

¹ Postea adscripsit Tycho.



| | | |
|----------|--|--|
| ... | III. Pro tempore hic accipiebatur cor Ω a Mer. in distantia æquatoria H. 4 $8\frac{1}{2}$, respondet tempus 14 25 45 Tota obscurata videbatur. |  |
| 2 31 10 | 14 31 15 ex corde Ω |  |
| ... | 15 28 35 ex corde Ω |  |
| 3 40 8 | 15 40 16 IV. Cauda Ω distabat a Meridiano 3 $45\frac{2}{3}$. Videbatur egredi ex vmbra sed obscure. |  |
| 3 53 35 | 15 53 16 Tempus ex distantia Arcturi a Meridiano. Consuetum obtinuit lumen. |  |
| 4 26 28 | V. 16 27 45 Arctur. Media pars illuminata. |  |
| 11 53 26 | Occ. limb. ζ per Merid. habens Alt. per Q. Tychon. inferioris limbi 36 47, superioris 37 $19\frac{1}{3}$, diameter 0 $32\frac{1}{3}$. | |
| 1 55 22 | Inter occ. limb. ζ & cor Ω | 27 $41\frac{1}{6}$ |
| 2 0 0 | Inter occ. limb. ζ & cor Ω | 27 46 |
| 2 5 9 | Repetita | 27 47 |
| 2 7 25 | Inter Spicam & occ. limb. ζ | 26 10 |
| 2 8 58 | Eadem repetita | 26 8 |
| 2 11 41 | Eadem repetita | 26 9 |
| 2 13 22 | Repetita | 26 $7\frac{3}{4}$ |
| 2 43 20 | Inter occ. limb. ζ et cor Ω | 28 3 |
| 2 45 40 | Eadem | 28 5 |
| 2 47 5 | Repetita eadem | 28 5 |

| | | |
|---------|--------------------------------|--------|
| 2 50 30 | Repetita | 28 7 |
| 2 56 54 | Inter occ. limb. ☾ & Spicam | 25 47½ |
| 2 58 44 | Eadem distantia | 25 40 |
| 2 59 52 | Repetita | 25 41½ |
| 3 1 25 | Repetita | 25 42¼ |
| 3 2 58 | Inter orient. limb. ☾ & Spicam | 25 12 |
| 3 4 0 | Inter orient. limb. ☾ & Spicam | 25 15 |
| 3 6 35 | Eadem dist. repetita | 25 16 |

Factæ sunt obseruationes hæ superius per Sextantem nouum Trigonum.

EXAMINATIO ECLIPSIS LUNARIS MECHANICA.

Alphonfinus calculus ponit ☾ in 19 46, Prutenicus vero in 19 36, differentia 0 10. Abumfi locum ☾ in 19 40 & locum ☉ ex meo calculo 22 50 ☾, semidiam. ☾ 16' 45'', semid. vmbræ 45' 30''.

A dimidio ingreßu ad centralem 43½' H. 1 M. 22

A centrali ad Medietatem 40¼ 1 16

Hinc per mechanicam praxin.

| | | Differentia |
|----------------------------------|----------|-------------|
| Quando ☾ primum vmbram attigit ☾ | 21 48 35 | 37 10 |
| Quando primum tota in vmbra | 22 25 45 | 24 15 |
| Quando media in ☉ Solis | 22 50 0 | 21 20 |
| Quando primum egrediebatur | 23 11 20 | 36 55 |
| Quando tota egreßa est | 23 48 15 | |

Si abumatur motus diurnus ☾ a Sole 12½ Gr. resp.

| | | |
|----------------------------|-------------|------------|
| ab initio ad medium | H. 1 M. 55½ | 1° 1' 30'' |
| a tota ad medium | 0 46 | 0 24 25 |
| a medio ad 1 egreßum | 0 40 | 0 21 5 |
| a medio ad finem | 1 49 | 0 57 55 |
| ab initio ad totam obscur. | 1 9½ | 0 37 0 |
| a primo egreßu ad finem | 1 9 | 0 37 0 |

N. B. Eclipsabatur de ☾ iuxta nostras rationes p. mta 16.

IUXTA CALCULUM

| | Prutenicum | Alphonfinum | Purbachij | Mæstlini ipſius | Noſtrum | Noſt. correctior. |
|--------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|----------------------|
| Primus ingreßus | 0 ^H 41 ^M | 2 ^H 36 ^M | 1 ^H 43 ^M | 2 ^H 15 ^M | 1 ^H 47 ^M | 1 42 |
| Totalis obscuratio | 1 48 | 3 47 | 2 54 | 3 25 | 2 56 | 2 51 |
| Medium Eclipseos | 2 35 | 4 24 | 3 31 | 4 7 | 3 40 | 3 35 |
| Primus Egreßus | 3 22 | 5 1 | 4 8 | 4 49 | 4 24 | 4 19 |
| Totalis liberatio | 4 29 | 6 12 | 5 19 | 5 59 | 5 33 | 5 28 |
| Digitus Ecliptici | 17° 19' | 15° 7' | 15° 11' | 15° 28' | | |

Verum Medium huius eclipsis 3^H 5^M

Locus Solis e neotericis tabulis ad horam 3

completam a media nocte in 22.49½ ☾

☾ in 90 gr. 2^H28^M

Sol oritur 6 16

Die¹ 2 Martij A. M. H. 3.5 fuit medium Tempus Eclipseos ☾. Fuit tunc locus ☉ in 22.50 ☾. Ad hoc tempus ex obseruationibus ☾ & fixis inquirebatur eius Longitudo, habita ratione parallaxeos quando extra 90 G. obseruabatur, in quo fuit H. 2.31 A. M. eodem die.

¹ In folio soluto codicis D conscriptum.

| | | | |
|-----------------------------|--------------------|---------------------|-------------------------|
| Ex distantia ☾ a ♄ | H. 0.16 | proueniebat locus ☾ | 22° 46' $\frac{1}{2}$ ♍ |
| | 0.29 $\frac{1}{2}$ | longit. ☾ | 22 46 $\frac{1}{2}$ |
| Ex dist. æquat. ☾ & Arcturi | 0.35 | | 22 44 $\frac{1}{6}$ |
| | 0.50 | locus ☾ | 22 43 $\frac{1}{2}$ |
| Ex distantia ☾ & Spicæ | 2.30 | | 22 39 $\frac{1}{2}$ |
| ☾ & cordis ☾ | 2.40 | | 22 38 $\frac{1}{6}$ |
| | 3.18 | | 22 42 $\frac{1}{2}$ |
| | 3.21 | | 22 44 $\frac{5}{6}$ |
| ☾ & Spicæ ♍ | 3.32 | | 22 42 $\frac{3}{4}$ |
| | 3.40 | | 22 40 $\frac{1}{2}$ |

DIE 23 APRILIS P. M.

| | |
|------------------------------|--|
| Altit. Merid. ☾ | |
| superioris cornu per Chalyb. | 48 15 |
| per Volub. | 48 15 $\frac{1}{2}$ |
| inferioris per Volub. | 47 46 |
| Canis min. occid. | Inter ☾ occ. limb. & mer. cap. II per. Sext. Δ |
| 60 0 | 26 27 $\frac{3}{4}$ |
| 61 20 | 26 30 |
| 61 48 | 26 31 $\frac{1}{2}$ |
| { eodem instanti Declin. | |
| super. cornu | 13 53 $\frac{1}{2}$ |
| inferioris | 13 23 |

DIE 25 APRILIS.

Obferuatio ☾ circa 90 Gradum.

| Canis min. a Merid. | Declin. sup. sup. cor. infer. | ☾ occ. limb. a corde ☾ | Altit. sup. cor. |
|---------------------|-------------------------------|------------------------|------------------|
| 73 46 | | 14 5 $\frac{3}{4}$ | 38 0 |
| 75 17 | 7 14 | 14 10 | 37 20 |
| 75 54 | 6 45 $\frac{1}{2}$ | 14 11 $\frac{1}{3}$ | 37 12 |
| 76 28 | 7 10 $\frac{1}{2}$ | 6 42 $\frac{1}{2}$ | |
| Cor. ☾ a Mer. | | ☾ occ. limb. a Spica | |
| 40 45 | | 39 56 $\frac{1}{3}$ | 36 40 |
| 41 21 | | 39 55 $\frac{3}{4}$ | 36 15 |
| 41 46 | | 39 54 $\frac{3}{4}$ | 36 0 |

DIE 23 MAIJ.

H. 8 M. 57 P. M. ☾ in 90 Gr. ab Ascendente.

| | | |
|--------------------|----------------------|---------------------------|
| 4 50 $\frac{1}{2}$ | Declin. super. limbi | 5 34 |
| | inferioris | 5 5 |
| | Diameter ☾ | 0 29 |
| | Occ. limb. ☾ or. | ☉ occ. Diff. Af. R. |
| 4 54 $\frac{1}{2}$ | 21 47 $\frac{1}{2}$ | 73 19 95 6 $\frac{1}{2}$ |
| 4 59 | 20 50 | 74 19 95 9 |
| 5 1 35 | 20 16 $\frac{1}{2}$ | 74 53 $\frac{1}{2}$ 95 10 |
| 5 3 $\frac{5}{6}$ | 19 46 $\frac{1}{2}$ | 75 24 $\frac{1}{2}$ 95 11 |
| | | 26 10 |

| | | | |
|-------------------------------|----------------------|---------------------|---------------------|
| 5 6 $\frac{5}{6}$ | 19 10 $\frac{1}{3}$ | 76 1 $\frac{3}{4}$ | 95 12 |
| 5 8 $\frac{5}{6}$ | Declin. sup. cornu ☾ | | 5 31 $\frac{1}{2}$ |
| 5 10 $\frac{1}{6}$ | inferioris | | 5 2 |
| | | | 0 29 $\frac{1}{2}$ |
| Alt. super. limbi per Q. min. | | | |
| | ☾ or. | ☉ occ. | Alt. ☉ |
| 5 15 $\frac{1}{2}$ | 17 21 | 77 53 $\frac{2}{3}$ | 95 14 $\frac{2}{3}$ |
| 5 17 $\frac{3}{4}$ | 16 51 $\frac{5}{6}$ | 78 23 $\frac{1}{2}$ | 95 15 $\frac{1}{3}$ |
| 5 20 | Declin. super. limbi | | 5 29 $\frac{3}{4}$ |
| | inferioris | | 5 0 $\frac{1}{4}$ |
| | | | 29 $\frac{1}{2}$ |
| Alt. super. limbi per Q. min. | | | |
| 10 5 $\frac{1}{3}$ | Decl. super. cornu | | 4 50 |
| | inferioris | | 4 19 |
| | | | 31 |

| Dist. ♄ & ☾ per Sext. | ♄ a Mer. per Arm. æquat. | Altit. per Q. min. sup. cor. ☾ |
|-----------------------|--------------------------|--------------------------------|
| 10 8 | 34 20 $\frac{1}{4}$ | |
| 10 13 $\frac{3}{4}$ | 34 21 | 77 33 |
| 10 17 $\frac{1}{6}$ | 34 21 $\frac{1}{2}$ | 27 |
| 10 20 $\frac{1}{3}$ | 34 22 $\frac{1}{2}$ | 20 $\frac{1}{2}$ |
| 10 23 $\frac{1}{4}$ | 34 24 | 26 |
| 10 26 $\frac{1}{2}$ | 34 24 $\frac{1}{2}$ | 80 0 |
| 10 36 $\frac{1}{6}$ | Declin. super. cornu ☾ | 4 46 $\frac{1}{2}$ B. |
| | inferioris | 4 14 |
| | Diameter ☾ | 0 32 $\frac{1}{2}$ |

DIE 24 MAIJ.

| Cor. ☾ occ. | Declin. sup. cor. infer. | Diam. |
|-------------|-----------------------------|----------------------|
| 10 31 38 | 73 30 0 30 0 2 | 0 28 $\frac{1}{2}$ |
| | Inter cor. ☾ & occ. limb. ☾ | |
| 10 38 15 | 75 0 | 36 14 $\frac{1}{2}$ |
| 10 43 22 | 76 11 | 36 15 |
| 10 46 20 | 76 54 | 36 17 $\frac{1}{2}$ |
| 10 51 57 | 78 2 | 36 18 $\frac{3}{4}$ |
| | Declin. | |
| | sup. cornu | infer. |
| 10 54 25 | 0 28 B. | 0 3 $\frac{1}{2}$ M. |
| | | 0 31 $\frac{1}{2}$ |

¹ Codex D habet 28, quod in cod. V in 32 correctum est.

DIE 6 NOUEMBRIS¹.

| | Q & ☾ or. limb. | Decl. ☾ sup. & inf. cor. | Alt. ☾ inf. cornu | Azim. ☾ or. limb. |
|-------|--------------------|--------------------------------|----------------------|----------------------|
| 7 32½ | 10 38½ | 5 47 | 20 46 | 40 16 |
| | | 6 10 | | |
| 7 36½ | 10 39 | 5 48 | 21 5 | 39 20 |
| | | 6 10 | | |
| 7 39½ | 10 40 | 5 49 | | |
| | | 6 11 | | |

Atque his tribus obseruationibus
ad ☾ potes tuto vti, adhibita ipsius
parallaxi & refractione.

DIE 29 NOUEMBRIS MANE¹.

Nota. ☾ fuit iuxta 90 gradum non
longe remota a maxima distantia per
epicyclum.

| | | |
|-------|-------------------------|----------|
| 7 58½ | Inter ☾ limb. orient. | 21 46½ |
| 8 0¾ | & Iouem | 21 45¾ |
| 8 2½ | Fuit Decl. limbi super. | 11 55 B. |
| | infer. 11 | 29 |
| 8 3 | Inter or. limb. & Iouem | 21 44½ |
| | Fuit tunc. Decl. super. | 11 54 |
| | infer. limbi 11 | 28 |
| 8 10½ | Decl. super. limbi | 11 53 |
| | inferioris | 11 26 |

DIE 28 DECEMBRIS MANE.

Hoc mane ☾ admodum prope Ioui
applicabat.

| | | |
|-------|---|-----------|
| 7 44½ | Inter limbum Ioui proximum in luna & ☿ | 1 20 |
| 7 48 | Eadem ☾ & ☿ distantia | 1 19 |
| 7 51 | Inter ☾ limb. prox. & ☿ | 1 20 |
| | Alt. infer. limbi ☾ | 23 54½ |
| | Azim. orient. limbi | 65 16 |
| | Decl. supremi limbi | 6 2½ bona |
| | alt. pin. | 6 2½ |
| 7 58½ | Inter ☿ & ☾ vt prius | 1 15 |
| | Alt. 21 17, Azim. | 67 45 |
| | Decl. infer. limbi ☾ | 5 34 |
| | alt. pin. | 5 34 |
| 8 4 | Inter ☿ & ☾ vt prius | 1 5 |
| | Decl. super. limbi | 6 0 |
| | inferioris | 5 30½ |
| 8 10 | Decl. super. limbi | 5 59½ |
| | inferioris | 5 30 |
| | centri ☾ | 5 45 |

Sed hæc varietas in distantia a ☿
accidit quia per radium fiebat obser-
uatio & in diluculo, erantque bini ob-
seruatores.

LOCA LUNÆ².

Demonstratio loci ☾ ex obseruat.

DIE 25 FEBRUARIJ.

N. B. ☾ iuxta max. lat. in ☾.

Æquatio temp. 4½^m add.

| | | |
|------------|------------------------------|-------------|
| H. 7 M. 2½ | Dist. occ. limb. ☾ ab Aldeb. | 26 42½ |
| | Semidiameter ☾ | 15 |
| | Dist. centri | 26 57½ |
| | Declin. centri ☾ | 17 45 |
| BA 74 23 | Declin. Aldeb. | 15 37 |
| CA 72 15 | Asc. rect. Aldeb. | 63 5¾ |
| BC 26 57½ | Asc. rect. ☾ | 91 10 25 |
| BAC 28 4½ | Resp. Longitudo | 1° 8' 36" ☾ |
| | Latitudo | 5 46 13 M. |

Ex Tabulis Prut. corr. med. mot. Longitudo

Ex nostr. Tab. Latitudo

Ergo Parallaxi 37' 10", modo ea latitudo ☾ recte se habeat.

¹ Pro correctione horologii vide infra inter obseruationes Veneris.

² E codice V.

DIE 27 FEBRUARIJ.

| | | |
|------------|-----------------------------------|----------|
| H. 9 M. 7 | Dist. centri ☿ ab Aldeb. | 52° 26' |
| BA 74 23 | Declin. centri ☿ | 16 8 B. |
| CA 73 52 | Aßumitur semid. | 15 |
| BC 52 26 | Afc. rect. ☿ | 117 46½ |
| BAC 54 40½ | | |
| H. 9 M. 26 | quando ☿ fuit iuxta 90 grad. | |
| | Dist. centri ☿ a corde ♀ | 27 46 |
| DA 76 3 | Declin. ☿ | 16 6 B. |
| CA 73 54 | Declin. cord. ♀ | 13 57 |
| DC 27 46 | Afc. rect. cord. ♀ | 146 35½ |
| DAC 28 41½ | Afc. rect. centri ☿ | 117 54 |
| | Resp. Longitudo | 26 49½ ☿ |
| | Latitudo | 4 51½ M. |
| | Æquat. temp. 4½ ^m add. | |
| | Ex Tabulis Prut. corr. Long. ☿ | 27 47 35 |
| | Differentia | 58 15 |

DIE 28 FEBRUARIJ.

| | | |
|-------------|-------------------------|-------------|
| H. 10 M. 45 | cum ☿ eßet in 90 grad. | |
| | Declin. | 13° 53' |
| | Hinc Longitudo ☿ obser. | 10° 15' 0'' |
| | Latitudo | 4 0 0 |
| | Arcus inclinationis | |
| | subt. 6 50 | 10 8½ ♀ |

Calculus veri loci ☿ DIE 2 MARTIJ ex stellis fixis in Eclipsi ☿.

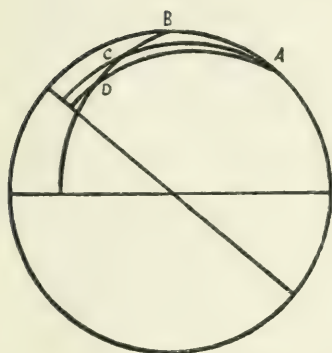
| | | |
|------------|--|--------------------|
| H. 2 M. 36 | cum ☿ eßet iuxta 90 grad. Eclipticæ ab Ascendente. | |
| | Dist. centri ☿ a { corde ♀ | 28° 15' |
| | Spica ♀ | 25 45 |
| | Declin. ☿ | 2 25 |
| | | Afc. rect. Declin. |
| | Cordis ♀ | 146 34½ 13 57 |
| | Spicæ ♀ | 195 53 50 8 57 M. |
| | Angulus diff. ascens. { 26 5½ a corde ♀ | |
| | 23 10 58 a Spica. | |
| | Hinc. Afc. rect. ☿ lim. | 172° 42½' |
| | Resp. Longitudo | 22 20 40'' |
| | pro lat. add. | 45 |
| | Ergo vera Longit. | 22 21½ ♀ |
| H. 3 M. 3 | Dist. centri ☿ a corde ♀ | 28 34 |
| | Declin. ☿ | 2 28 |
| | Hinc. locus ☿ | 22 40 |
| | Parall. | 3 |
| | Pro latit. | 1 |
| | Vera longit. | 22 44 |

DIE 23 MAIJ

quando ☾ fuit circa maximam fere remotionem in προσθαφαίρ.

| | | |
|--|-----------------------------------|------------------------|
| H. 5 M. 14 | Dist. occid. limbi ☾ æquat. a ☉ | 95° 15 $\frac{1}{2}$ ' |
| | Dist. centri | 95 31 $\frac{1}{2}$ |
| | Afc. rect. ☉ | 70 33 |
| | Afc. rect. ☾ | 166 4 20'' |
| N. B. Parallax et refractio ☉ in hac alt. 24 $\frac{1}{2}$ mutuo se elidunt. | Declin. ☾ | 5 16 B. |
| | Resp. Longitudo | 15 8 $\frac{3}{4}$ mp |
| | Latitudo | 0 39 $\frac{1}{2}$ M. |
| | Ex Tabulis Prut. corr. mot. Long. | 14 59 $\frac{1}{4}$ mp |

Fuit autem ☾ iuxta 90 grad. ab Ascendente H. 8 M. 57
ideoque parallaxes longit. hoc loco obtinuit satis notabiles.
Quæ sequenti modo enucleabantur.



In Triangulo BAD dantur

BA 34° 5' 30'' } compl. { Eleuat. poli
DA 84 44 0 } Declin. ☾

BAD 17 0 0 dist. ☾ a Merid.

BD 52 25 $\frac{3}{8}$ compl. altit. ☾

Parallax in circulo altit. ex Tab. Prut. 46' 15''

Angulus DBA 158 27 $\frac{2}{5}$ compl. Afc. R. ad 180.

In Triangulo CBA dantur.

BA 34 5 $\frac{1}{2}$

CB 51 39 $\frac{1}{2}$

CBA 158 27 $\frac{2}{5}$

Ergo CA 83 59 compl. veræ declinationis

BAC 16 49 $\frac{1}{8}$ dist. ☾ a meridie.

| | |
|-------------------------|-------------------------|
| Vera Afc. R. ☾ | 165° 53 $\frac{1}{2}$ ' |
| Vera Declin. Borea | 6 1 |
| Resp. Longitudo | 14 41 16 mp |
| Latitudo | 0 2 2 M. |
| Ergo Parallax { Longit. | 27 30 |
| { Latit. | 37 28 |

| | | |
|------------|--------------------------|---------------------|
| H. 9 M. 22 | Dist. centri ☾ a ☿ | 34° 37' |
| | Declin. centri ☾ | 4 34 Sep. |
| | Declin. ☿ | 17 58 B. |
| | Afc. R. ☿ e recent. obs. | 135 13 0 |
| | Angulus diff. ascenf. | 32 38 $\frac{1}{2}$ |
| | Ergo Afc. R. ☾ | 167 52 0 |
| | Resp. Longitudo | 16 59 45 mp |
| | Latitudo | 17 4 0 |
| | | 0 5 |
| | | 17 9 0 |

In 90 gradu H. 8 M. 55. Parallax longit. 5' add.
habita ratione refractionis. Arcus inclinationis
add. 20''. Igitur verus locus ☾ 17° 9' mp in propria
orbita.

OBSERVATIONES SATURNI.

DIE 10 JANUARIJ P. M.

Inter ♄ & Luc. √ per Sext. Δ cum eβet
 ♄ prope Merid. I 14 23

II 14 22³/₄

Paulo ante Merid. Declin. ♄ Borea per

Armillas maiores 12 30¹/₂

alt. pinnacid. 12 30³/₄

Alt. Merid. ♄ per Volub. 46 35

DIE 15 JANUARIJ¹.

Declin. ♄ Borea vno 12 33¹/₂

altero 12 33

Alt. ♄ Merid. per Volub. 46 38³/₄

DIE 16 JANUARIJ.

Inter ♄ & oculum 24 33¹/₂

♄ per Sext. Δ 24 33¹/₂

Declin. eius per Armill. 12 33 B.

Fuit autem ♄^{us} tunc iuxta

meridianum. Alt. Merid.

per Volub. 46 38³/₄

DIE 19 JANUARIJ¹.

Alt. ♄ per Volub. max. 46 42¹/₂

per Q. Volub. 46 41¹/₂

per Muralem 46 42

Declin. ♄ per Armillas 12 35¹/₂

12 35³/₄

DIE 24 JANUARIJ.

Alt. Merid. ♄ per Q. Volub. 46 47¹/₂

DIE 25 FEBRUARIJ P. M.

H. 7 37 Inter ♄ & oculum ♄ per Sext.

22 9

Erat in Merid. 17¹/₂ ☉, Alt. ♄ 27 1

Declin. ♄ 13 31¹/₂

7 41' Eadem dist. ♄ & Aldeb. 22 8³/₄

Declin. ♄ Bor. 13 31¹/₂

7 57' 32" Transiuit Boreale caput ♄

per Merid., hinc potes verificare

horologium, erat in Meridie ad

Solem correctum.

¹ E codice V. Defunt in D.

8 9 16 transiuit inferius caput ♄ per
 Merid., & hinc etiam potes ve-
 rificare antecedentia tempora,
 erat autem tempus exactius ob-
 seruatum in secundis quam antea.

DIE 5 NOUEMBRIS.

Observatio Saturni Achroynychia
 in Solis ☿.

Vesperis serenitate post pluuias &
 ventos restituta observabatur ♄ circa
 ☉ oppositum in hunc qui sequitur
 modum.

Horologium ad stellas emendaba-
 tur Hora 8¹/₂ P. M. ita vt exquisite illis
 corresponderet.

H. 8 39' Inter Lucid. √ & ♄ 27 47³/₄

Alt. ♄ 34¹/₂

8 41¹/₂ Eadem distantia fuit 27 47³/₄

8 44¹/₂ Eadem distantia 27 47³/₄

Declinatio ♄ circa hæc

tempora 17 22 B.

8 47³/₄ Eadem dist. ♄ & Luc. √ 27 47

Fuit tunc declin. ♄ B. 17 22

& eiusdem Altitudo 35 0

8 50³/₄ Eadem distantia 27 47³/₄

Fuit autem eodem in-

stanti Alt. ♄ 35 30

8 54 Repet. dist. ♄ ab √ Luc. 27 47³/₄

Alt. ♄ 35 50

Declin. ♄ tunc fuit 17 22

altero pinnacid. 17 21³/₄

Nota. Pro declinatione examinan-
 da fuit tunc Aldeb. 15 38, debuit esse
 15 37.

Dist. ♄ ab

Aldeb.

Declin. ♄

Alt. ♄

9 2 7 43¹/₂ 17 22 36 48

9 7 7 43³/₄ 17 22 37 20

9 11¹/₂ 7 43³/₄ 17 22 37 53

Fuit circa hæc tempora declin. Al-
 deb. 15 38, abundat hæc declinatio
 vno M.

9 15 7 43¹/₂ 38 17

N. B. Horologium emendatum Ho-
 ra 8¹/₂ iusto celerius ibat vsque in Ho-

ram $9\frac{1}{2}$ per integram Horam tribus Minutis, qui error præcaueri potest, et si nihil hoc loco sensibilibiter importet.

Notabene. Hæ obseruationes η iuxta ipsius ad Solem Achroynch. positum satis sunt exquisitæ: potes autem in distantia a Lucida \vee vti P. 27 M. 47 $\frac{1}{2}$. In distantia vero ab oculo γ P. 7 M. 43 $\frac{1}{2}$. Erat autem stella η his intermedia, quasi in vna linea recta maioris modo. Stella γ versus ortum, \vee vero versus occasum constituta. Declinationem vero η aßumere potes P. 17 M. 21 eo quod oculus γ vnico Minuto declinationem iusto maiorem ostenderet, quæ stella η versus ortum vicina erat.

Atque ex his locum η satis certo & tuto circa \odot & rimari licebit.

DIE 10 NOUEMBRIS, MANE.

H. 5 58' Inter η & Aldeb. 8 0 $\frac{1}{2}$
Declin. η 17 20

6 0 Repet. dist. inter η & Aldeb. 8 0 $\frac{3}{4}$
Declin. η 17 19

6 3 Repetita inter η & Aldeb. 8 1
Declin. η 17 19

Nota. η erat iuxta \odot Solis tum paulum prætergreßus, verum erat decliuis versus Horizontem occiduum, distans ab eo quoad visum quanta est distantia lucidioris in pedibus Π & lucidi humeri Orionis. Hinc potes rimari refractionem, quæ tamen respectu Aldeboræ perexigua esse potuit, eo quod in Altitudine non multum discrepabant.

H. 6 7' Inter η & luc. pedem Π 36 49 $\frac{1}{2}$
Declin. η 17 18 $\frac{1}{2}$
6 10 Inter η & luc. pedem Π 36 49 $\frac{1}{2}$
Declin. η 17 19

Altitudo η circa hanc vltimam obseruationem fuit quasi partium 11 per minimum quadrantem, hinc potest eius locus verificari iuxta \odot Solis si Vesperis haberi nequit, vel conferri inuicem.

EODEM DIE P. M., VESPERI.

Ob η iuxta Solis \odot .

η hic fuit altior quam hodie mane & sine refractione.

| | Dist. inter η & lucid. \vee | Declin. η |
|--------------------|------------------------------------|---------------------|
| 8 52 $\frac{1}{2}$ | 27 26 | 17 15 $\frac{1}{2}$ |
| 8 55 $\frac{5}{6}$ | 27 25 $\frac{3}{4}$ | |
| 8 58 $\frac{1}{3}$ | 27 26 $\frac{1}{2}$ | 17 15 $\frac{1}{2}$ |
| 9 1 | 27 26 $\frac{1}{2}$ | 17 16 |

Pone hic distantiam η & lucidæ \vee 27 26 & declinationem η 17 15 $\frac{1}{2}$ B.

| | Inter η & Aldeb. | Decl. η |
|-------------------|-----------------------|---------------------|
| 9 5 | 8 4 $\frac{1}{2}$ | 17 16 |
| 9 8 | 8 5 $\frac{1}{2}$ | 17 16 |
| 9 9 $\frac{1}{2}$ | 8 5 $\frac{3}{4}$ | 17 16 |
| 9 11 | 8 6 | 17 16 $\frac{1}{4}$ |

Altitudo η iuxta has 43 partium.

| | | | Alt. η |
|--------------------|-------------------|---------------------|------------------|
| 9 14 | 8 5 $\frac{3}{4}$ | 17 16 $\frac{1}{2}$ | 44 |
| 9 18 $\frac{1}{2}$ | 8 5 $\frac{5}{6}$ | 17 16 | 44 $\frac{1}{2}$ |

Pone distantiam η ab Aldeb. 8 5 $\frac{3}{4}$ & insensibiliter aberrabis, Declinationem vero 17 16 Boream, nam quæ hodie mane accepta est, & declinatio præsertim, & distantia iuxta Horizontem fiebant & refractioni erant obnoxia.

9 24 Inter η & lucid. \vee 27 27, Decl. η 17 16 $\frac{1}{2}$

Altitudo η fuit tunc proxima 45 part.

9 26 Inter η & lucid. \vee 27 26 $\frac{1}{2}$ bona.
Declin. η 17 16 $\frac{1}{2}$

9 30 Inter η & lucid. ped. Π 36 54

Altitudo lucid. ped. Π 25 $\frac{1}{2}$, dubia.

9 32 Eadem dist. 36 55

9 34 Eadem repetita 36 54

9 37 Eadem 36 53 $\frac{3}{4}$

9 40 Eadem repetita 36 53 $\frac{3}{4}$

Fuit circa hæc tempora Alt. lucidi pedis Π 25 $\frac{1}{2}$. Pone in his omnibus η a lucido pede Π distantiam 36 53 $\frac{3}{4}$ & insensibiliter aberrabis. Altitudo stellæ Π in pedibus erat vltimo obseruata 27 $\frac{1}{2}$. Ergo citra sensibilem refractionem. Declinatio vero η hic aßumi poterit verior & vltimo obseruata vno pinnacidio 17 16 $\frac{1}{2}$

alt. pinn. 17 16 $\frac{1}{2}$

Potes itaque aſſumere declinationem \hbar 17 16 $\frac{1}{2}$. Nam quæ hodie mane accipiebatur nimis magna fuit ob refractionem, quæ continebat iuxta \hbar ad occaſum appropinquationem in Altitud. vix 15 part. Atque ex his & antecedentibus die 5 Nouembris factis obſervationibus \hbar locus Acronychius exquiſite conſtrui poteſt.

DIE 25 NOUEMBRIS, VESPERI.

| | | | |
|---|----------------------|---------------------|--------|
| 8 | 1' Inter \hbar & | 26 21 $\frac{1}{6}$ | } Alt. |
| 8 | 3 lucid. \vee | 26 21 | |
| 8 | 7 Diſt. eadem | 26 21 $\frac{1}{2}$ | |
| | Declin. \hbar Bor. | 17 1 | } 33° |
| | alt. pin. 17 | 0 $\frac{1}{2}$ | |

DIE 1 DECEMBRIS.

Vesper. Ex nuper correcto horologio.

| | | |
|---|-----------------------------------|--------------------|
| 7 | 3 $\frac{1}{2}$ Inter \hbar & | 5 59 $\frac{1}{6}$ |
| 7 | 7 lucid. \vee | 5 59 |
| | Decl. \hbar 16 57, Alt. \hbar | 36 20 |

DIE 6 DECEMBRIS.

| | | |
|---|--|---------------------|
| 6 | 41 Declinatio \hbar Bor. | 16 53 |
| | alt. 16 | 52 $\frac{3}{4}$ |
| 7 | 5 Eadem decl. repetita | 16 52 $\frac{1}{2}$ |
| | Eadem repet. declin. | 16 52 $\frac{3}{4}$ |
| | Hæ duæ posteriores rectius ſe habent. | |
| 7 | 12 $\frac{3}{8}$ Inter \hbar & lucid. \vee | 25 42 $\frac{1}{8}$ |
| 7 | 31 $\frac{1}{2}$ | 25 39 $\frac{5}{8}$ |
| 7 | 32 $\frac{3}{4}$ | 25 40 $\frac{1}{6}$ |
| 7 | 33 $\frac{1}{2}$ | 25 40 $\frac{1}{6}$ |
| 7 | 39 $\frac{1}{2}$ Inter \hbar & oculum γ | 9 53 |
| 7 | 40 $\frac{1}{2}$ | 9 54 |
| 7 | 41 $\frac{1}{2}$ | 9 53 $\frac{1}{2}$ |
| 7 | 42 $\frac{3}{4}$ | 9 54 |
| 7 | 44 $\frac{1}{2}$ | 9 54 |
| 7 | 46 $\frac{1}{2}$ | 9 54 |

Nota. Horologium ad Horam 5 $\frac{1}{2}$ Matutinam ſequentem ſaltem ſeſqui-alt. min. iuſto tardius mouebatur, qui error illi a Meridie proxime antecedente quando ad Solem corrigebatur accidit.

¹ E codice V.

Pro cognoscendo an Sextans hic, quo in his omnibus diſtantijs vſi ſumus, recte ſe habeat, obſeruauimus diſtantiã cordis Ω & inferioris capitis Π

37 0
36 59 $\frac{3}{4}$

quod ſatis conuenit cum obſeruationibus prius deprehenſis in his ipſis ſtellis, vnde conſequitur quod Sextans hic nulli ſenſibili errori obnoxius.

DIE 14 DECEMBRIS.

| | | |
|---|--|---------------------|
| 8 | 6 Inter lucid. \vee & \hbar | 25 16 |
| 8 | 11 $\frac{1}{2}$ | 25 15 $\frac{1}{2}$ |
| 8 | 13 $\frac{1}{2}$ | 25 15 $\frac{1}{2}$ |
| 8 | 22 $\frac{3}{4}$ Inter \hbar & oculum γ | 10 25 |
| 8 | 25 $\frac{1}{2}$ | 10 25 $\frac{1}{2}$ |
| 8 | 29 | 10 25 $\frac{1}{2}$ |
| | Declinatio \hbar | 16 47 |
| | Repetita | 16 47 |

DIE 15 DECEMBRIS.

| | | |
|---|-----------------------------------|---------------------|
| 8 | 5 Inter \hbar & oculum γ | 10 26 $\frac{3}{8}$ |
| 8 | 8 | 10 27 |
| | Declinatio \hbar | 16 47 |
| | | 16 47 $\frac{1}{2}$ |

DIE 16 DECEMBRIS, VESPERI.

| | | |
|---|--|---------------------|
| 8 | 26 $\frac{1}{6}$ Diſt. inter \hbar & | 25 9 |
| 8 | 28 $\frac{1}{2}$ Luc. \vee | 25 9 $\frac{1}{8}$ |
| 8 | 32 $\frac{1}{2}$ | 25 9 $\frac{1}{8}$ |
| 8 | 36 $\frac{1}{2}$ Diſt. inter \hbar & | 10 29 |
| 8 | 37 $\frac{1}{2}$ oculum γ | 10 29 $\frac{1}{4}$ |
| 8 | 40 $\frac{2}{3}$ | 10 29 $\frac{1}{3}$ |
| 8 | 49 $\frac{1}{6}$ Declin. \hbar | 16 46 |
| | Repet. declin. | 16 45 $\frac{3}{4}$ |
| 8 | 57 Tranſiuit \hbar per Merid. habens | |
| | Alt. per Chalyb. | 50 50 $\frac{1}{3}$ |
| | per Volub. | 50 50 $\frac{2}{3}$ |

Nota. Horologium in Meridie 8 minutis iuſto tardius mouebatur, qui error illi ab Hora 6 $\frac{1}{2}$ irrepiſit.

Indagatio¹ apparentium motuum \hbar ⁿⁱ cum circa \odot ^{nem} medij \odot ^{lis} ſimpl. verſaretur, vt hinc inde \odot ^{nis} cum medio motu \odot ^{lis} momentum rite conſtet.

DIE 5 NOUEMBRIS.

| | |
|--------------------------|--|
| H. 8 M. 54 Dift. \hbar | |
| a lucida ∇ | 27° 47 $\frac{1}{2}$ |
| Declin. \hbar | 17 21 B. |
| H. 9 M. 2 Dift. \hbar | |
| ab Aldeb. | 7 43 $\frac{1}{4}$ |
| Ergo H. 9 M. 0 | |
| Afc. R. \hbar limitata | 55 14 40 vel 50 |
| Declinatio | 17 21 B. |
| Resp. Longitudo | 27 0 $\frac{1}{8}$ \oslash vel $\frac{1}{8}$ |
| Latitudo | 2 16 $\frac{1}{12}$ M. |

DIE 10 NOUEMBRIS.

| | |
|--------------------------|------------------------|
| H. 9 M. 0 Dift. \hbar | |
| a lucida ∇ | 27° 26' |
| Declin. \hbar | 17 15 30'' B. |
| H. 9 M. 8 Dift. \hbar | |
| ab Aldeb. | 8 5 45 |
| Ergo H. 9 M. 5 | |
| Afc. R. \hbar limitata | 54 50 |
| Resp. Longitudo | 26 36 \oslash |
| Latitudo | 2 16 $\frac{1}{12}$ M. |

Excerpto igitur simplici motu \odot ^{lis} ex proprijs Tabulis ac posteriori loco \hbar ⁿⁱ tanquam exactiori adaptato, comperitur secundum Calculi subductionem \oslash \hbar cum medio motu simplicis \odot ^{lis} incidisse in diem 7 Nouembris H. 5 M. 48 P. M., eratque

Locus \hbar apparens iuxta obseruationem 26° 51' 18'' \oslash

Ex calculo { Coperniano 26 45 40 \oslash
Alphonfino 29 47 45 \oslash

Collimatus omnia trutinando colligitur ex obseruatione diej 5 Nouembris & longitudine illic constituta 27 0 20 \oslash , quod tempore \oslash habuerit long. 26 50 40. Sed ex obseruatione diej 10, quando fuit secundum long. in 26 36 0 \oslash , colligitur eadem iuxta \oslash 26 51 40, differentia est minuti vnus, cuius dimidium additum minori dat 26 51 10, verum locum obseruatum tempore \oslash cum \odot . Sed ab hoc auferenda sunt M. 2 propter motum æqualem in suo ductu, sicque euadet verus & limitatus locus tempore \oslash , cui te potes fundare, 26° 49' 10'' \oslash .

OBSERVATIONES IOVIS.

DIE 9 JANUARIJ, P. M.

| | |
|--|--------------------------|
| H. 8 $\frac{1}{2}$ Declin. \mathcal{A} Borea | 17 33 $\frac{1}{2}$ |
| | alt. 17 33 $\frac{3}{4}$ |
| 9 3' Inter \mathcal{A} & infer. | 30 44 $\frac{1}{2}$ |
| 9 5 caput Π per | 30 44 |
| 9 6 Sext. veterem | 30 44 |
| 9 13 Inter \mathcal{A} & | 10 3 |
| 9 15 cor \oslash per | 10 3 $\frac{1}{8}$ |
| 9 17 Sext. vet. | 10 3 $\frac{1}{4}$ |

DIE 10 JANUARIJ.

Declin. \mathcal{A} ipsemet obseruauit postquam quasi 10 Gr. esset supra horizontem

17 39 $\frac{1}{2}$

DIE 16 JANUARIJ, P. M.

| | |
|-----------------------------|-------------------------|
| Declin. \mathcal{A} Borea | vno 17 48 $\frac{1}{2}$ |
| | alt. 17 49 |

Per Volub.
cordis \oslash

| Azim. | Alt. | | Per Sext. |
|-------|---------------------|-----------------------|---------------------|
| 74 57 | 26 35 | Inter \mathcal{A} & | 28 20 $\frac{1}{8}$ |
| 74 15 | 26 57 | Canem | 28 20 |
| 73 45 | 27 17 $\frac{1}{8}$ | minorem | 28 20 $\frac{1}{8}$ |
| 72 57 | 27 45 $\frac{1}{4}$ | Inter \mathcal{A} | 10 58 |
| 72 24 | 28 11 | & cor \oslash | 10 58 |
| 72 0 | 28 17 | Declin. \mathcal{A} | 17 49 $\frac{1}{8}$ |
| | | | 17 49 $\frac{1}{2}$ |

DIE 22 JANUARIJ, VESPERI.

| | |
|---|---------------------------|
| H. 9 $\frac{1}{2}$ Inter \mathcal{A} & canem | I 27 43 $\frac{1}{4}$ |
| minorem per Sext. | II 27 44 |
| | III 27 43 $\frac{1}{4}$ |
| H. 9 $\frac{1}{2}$ Inter \mathcal{A} & infer. | I 25 24 |
| caput Π | II 25 24 $\frac{1}{8}$ |
| Declin. \mathcal{A} Bor. | vno 18 5 |
| | altero 18 5 $\frac{1}{8}$ |

H. 9 $\frac{3}{4}$ Fuit calx pedis Π in Meridiano
vnde tempus aßignatum exami-
nari poßit.

N. B. Non fuit satis serenum cum \mathcal{A}
obseruaretur.

DIE 24 JANUARIJ.

Cum calx pedis Π eßet iuxta Meri-
dianum obseruabatur \mathcal{A} .

| | |
|------------------------------|---------------------------------|
| Inter \mathcal{A} & canem | 27 31 |
| minorem per Sext. | 27 31 $\frac{1}{6}$ |
| Inter \mathcal{A} & infer. | 25 8 |
| caput Π | 25 8 $\frac{1}{4}$ |
| Declin. \mathcal{A} Bor. | vno 18 9 |
| | altero pinn. 18 8 $\frac{1}{2}$ |

DIE 30 JANUARIJ P. M.

Per Sext. Trig. veterem.

| | |
|--|---------------------|
| 8 55 Inter \mathcal{A} & canem min. | 26 53 $\frac{2}{3}$ |
| 8 57 Repetita | 26 54 |
| 8 58 Inter \mathcal{A} & infer. | 24 22 $\frac{1}{4}$ |
| 8 59 caput Π | 24 22 $\frac{1}{4}$ |
| 9 2 Inter \mathcal{A} & cor Ω | 12 48 |
| 9 3 Eadem dift. | 12 47 $\frac{1}{2}$ |
| 9 4 Repetita dift. | 12 48 $\frac{1}{6}$ |
| 9 7 Decl. \mathcal{A} B. per | 18 23 |
| Armillas | 18 22 $\frac{2}{3}$ |

DIE 15 FEBRUARIJ P. M.

| | |
|--|---------------------|
| Inter \mathcal{A} & cor Ω per Sext. | 14 44 |
| | 14 44 $\frac{1}{6}$ |
| Decl. \mathcal{A} per Armillas | 18 55 B. |

DIE 25 FEBRUARIJ.

Obseruatio \mathcal{A} adhuc retrogradi & est
fatis diligens.

| | |
|--|---------------------|
| 9 36' 19" \mathcal{A} Merid. in Altit. | |
| per Chalyb. | 53 14 |
| per Volub. | 53 13 $\frac{1}{8}$ |

Per Sextantem

| | |
|---|---------------------------|
| 9 44 Inter \mathcal{A} & infer. | 21 36 |
| 9 45 $\frac{1}{2}$ cap. Π | 21 36 $\frac{1}{2}$ |
| 9 47 | 21 36 $\frac{3}{4}$ |
| 9 50 Inter \mathcal{A} & cor Ω | 15 41 $\frac{1}{4}$ |
| 9 52 | 15 41 |
| 9 54 | 15 41 |
| Declin. per Armill. Bor. vno | 19 9 |
| | altero 19 9 $\frac{1}{2}$ |

DIE 27 FEBRUARIJ.

| | Per Sext. | Declin. \mathcal{A} |
|---------------------------------------|---------------------|-----------------------|
| 10 6 Inter \mathcal{A} & | 15 51 | 19 12 $\frac{1}{4}$ |
| 10 8 $\frac{1}{2}$ cor Ω | 15 51 | 19 12 $\frac{1}{4}$ |
| 10 13 Inter \mathcal{A} & | 21 26 $\frac{1}{2}$ | 19 12 |
| 10 16 $\frac{1}{2}$ infer. cap. Π | 21 26 $\frac{2}{3}$ | 19 12 |
| 10 20 | 21 26 $\frac{3}{4}$ | 19 12 $\frac{1}{2}$ |

Pone 21 26 $\frac{2}{3}$

10 30 40 Transiuit cor Ω Merid., hinc
poßunt verificari omnia antece-
dentia tempora, collatione facta
cum transitu capitum Π superius
annato¹.

Debebat autem transiuiße H. 10 27'
50'', vnde tempora obseruationibus
planetarum ascripta sunt emendata
proportionaliter, & cum transitu M. C.
per Armillas Zodiacales consentiebat
ista temporis verificatio.

DIE 28 FEBRUARIJ P. M.

Alt. \mathcal{A} Merid. per Q. Volub.² 53 17 $\frac{1}{4}$

Per Sext. Δ

| | |
|---|---------------------|
| 9 53 Inter \mathcal{A} & cor Ω | 15 55 |
| 9 56 | 15 54 $\frac{1}{2}$ |
| 10 0 Inter \mathcal{A} & Mer. | 21 22 |
| 10 3 caput Π | 21 21 $\frac{2}{3}$ |
| Declin. \mathcal{A} Borea | 19 13 |

Locus \mathcal{A} ex obseruationibus die 28
Februarij³.

| | |
|---|------------|
| Altitudo \mathcal{A} mer. per Volub. 53° 17 $\frac{1}{4}$ ' | |
| Declin. \mathcal{A} | 19 13 |
| H. 9 M. 53 Dift. \mathcal{A} a corde Ω | 15 55 |
| Declin. cord. Ω | 13 57 10B. |
| Afc. R. eiusdem | 146 34 25 |
| Angulus diff. ascenf. | 15 41 |
| Ergo Afc. R. \mathcal{A} | 130 53 20 |

Vice versa ab inf. cap. Π

| | |
|----------------------------|---------------------|
| Dift. ab inf. cap. Π | 21 22 |
| Declin. Pollucis | 28 57 40 |
| Afc. eiusdem | 109 59 50 |
| Angulus diff. ascenf. | 20 53 $\frac{1}{3}$ |
| Ergo Afc. R. \mathcal{A} | 130 53 0 |
| Afc. R. limit. | 130 53 10 |
| Resp. Longitudo | 8 11 10 Ω |
| Latitudo | 0 57 53B. |

¹ Cf. infra inter obseruationes Veneris.

² Cf. supra inter obseruationes lunæ p. 256.

³ E codice V.

DIE 29 FEBRUARIJ.

| | | |
|------|-----------------|-----------------------------------|
| 9 29 | 5 Alt. 2 Merid. | |
| | per Volub. | 53 19 |
| | per Tych. | 53 18 ⁵ / ₈ |

DIE 1 MARTIJ.

| | | |
|----------------------------------|---------------------------------|--|
| H. 6 ³ / ₈ | Dist. æquat. inter 2 & oculum 8 | |
| | 67 45 per Armillas. | |
| Alt. 2 | Merid. per Chalyb. | 53 20 |
| | per Volub. | 53 19 ¹ / ₂ |
| | per Tychon. | vet. 53 20 |
| | | nouo 53 19 ³ / ₄ |

DIE 2 MARTIJ.

| | | |
|---------------------------------------|--------------------------|-----------------------------------|
| H. 9 M. 9 ³ / ₈ | transiit 2 Merid. per Q. | |
| | Volub. habens alt. | 53 20 ¹ / ₂ |
| H. 12 M. 5 | Declin. 2 | 21 23 |

DIE 23 MAIJ.

| | | |
|-----------------------------------|-----------------------------------|-----------------------------------|
| 10 35 ¹ / ₈ | Declin. 2 Bor. | 17 58 ¹ / ₂ |
| | Inter 2 & cor 8 | Dist. æq. 2 |
| 10 40 | 11 41 ⁵ / ₈ | 83 11 |
| | | Alt. 2 |
| 10 43 ¹ / ₈ | 11 40 | 72 40 |
| 10 46 ⁵ / ₈ | 11 40 ¹ / ₂ | 73 12 |
| 10 48 ⁵ / ₈ | 11 40 | 73 48 |
| 10 51 ⁵ / ₈ | Declin. 2 Bor. | 17 59 |

DIE 15 OCTOBRIS MANE.

| | | | |
|----------------------------------|---------------------|---------------------------------------|--------|
| 4 22 ¹ / ₈ | Cor 8 or. | Decl. 2 | Alt. 2 |
| | 52 7 | 8 20 B. | 18 43 |
| | | alt. 8 20 ¹ / ₈ | |
| | Inter 2 & cor 8 | | |
| | | per Sext. | |
| 4 50 ³ / ₈ | 45 2 | 17 7 ¹ / ₄ | |
| 4 51 ¹ / ₂ | 44 50 | 17 7 ¹ / ₄ | |
| 4 53 ² / ₈ | 44 16 | 17 7 ¹ / ₂ | |
| | Inter 2 & can. min. | | |
| | 43 30 | 53 13 | |
| | | 53 13 | |
| 4 56 ² / ₈ | Decl. 2 | 8 20 | 23 55 |
| | Repetita | 8 20 ¹ / ₄ | |

Ad diem 15 Octobris mane¹.

| | | |
|-------|-----|-------------|
| Latus | BA | 80° 54' 30" |
| | CA | 76 2 10 |
| | BC | 16 15 30 |
| | BAC | 15 48 52 |
| | | 146 34 30 |

| | |
|-----------------|-----------|
| Afc. R. ♂ | 162 23 22 |
| Dist. æquat. | 15 49 |
| Afc. R. cord. 8 | 146 34 30 |

E codice V.

| | |
|---------------|-------------------|
| Afc. R. ♂ | 162 23 30 |
| H. 4 M. 40 | Declin. 9 5 30 B. |
| Resp. Longit. | 10 18 11 11 |
| Latit. | 1 28 32 B. |

A Cane minore

| | | | |
|----------|----------------------------------|-----|-----------------------------------|
| Latus BA | 81° 40' | BA | 81° 40' |
| CA | 76 2 ¹ / ₈ | CA | 83 46 ¹ / ₂ |
| BC | 17 7 ¹ / ₄ | BC | 53 13 |
| BAC | 16 29 20 | BAC | 53 38 37" |

| | |
|---------|-----------|
| Afc. | Afc. Can. |
| cord. 8 | 146 34 30 |
| min. | 109 26 5 |

| | | |
|----------------------------------|----------------|---------------------|
| Afc. R. 2 | 163 3 50 | 163 4 42 |
| H. 4 ⁵ / ₈ | Pone Afc. R. 2 | 163° 4', Declin. B. |
| | | 8° 20'. |

Resp. Longitudo 11° 12' 29" 11p,
Latitudo 1° 1' 40" Bor.

Hinc per eorum adinuicem latitudinem et differentiam longitudinis inuenta est eorum distantia per operationem 1° 0' 37".

DIE 17 OCTOBRIS MANE.

| | |
|--------------------------------|----------------------------------|
| Cum 2 distaret a Mer. ad ortum | |
| 32 35 obseruata est | 8 11 ¹ / ₂ |
| eius declin. Bor. | 8 11 ¹ / ₂ |

DIE 27 OCTOBRIS.

6 24 Declin. 2 7 37

Postea obseruabatur Iupiter & cor 8 vt Venus a Ioue melius obseruari viderique propter Auroram posset.

| | | | |
|----------------------------------|----------------------------------|----------------------------------|---------|
| | Inter 2 & cor 8 | Decl. 2 | Alt. 2 |
| 6 43 ¹ / ₂ | 19 3 ¹ / ₈ | 7 36 | 38 fere |
| 6 48 ¹ / ₂ | 19 2 ³ / ₄ | 7 36 ¹ / ₂ | 38 42 |
| 6 50 ³ / ₄ | 19 2 | 7 36 | 38 53 |
| 6 52 ¹ / ₄ | 19 2 ³ / ₄ | 7 36 | 38 58 |
| 6 54 ¹ / ₂ | 19 2 ¹ / ₂ | 7 36 ¹ / ₂ | 39 6 |

Potes potius fidere primæ obseruationi et ponere distantiam 19 3 vel potius 19 2³/₄ ad minimum.

DIE 6 NOUEMBRIS.

| | | | | |
|----------------------------------|-----------------------------------|---------------------------------|--------|------------------------|
| Corr. | Dist. 2 & cordis 8 | Decl. 2 | Alt. 2 | Azim. 2 a Mer. ad ort. |
| 7 7 | 20 26 ¹ / ₂ | 7 5 ¹ / ₄ | | |
| 7 10 ¹ / ₂ | 20 27 | 7 5 ¹ / ₄ | | |
| 7 14 | 20 27 | 7 5 ¹ / ₂ | 40 55 | 8 22 |

DIE 10 NOUEMBRIS MANE.

| | | |
|--------------|-------------|----------------------------------|
| Temp. verif. | Inter 2 & 8 | Decl. 2 |
| 6 58 | 29 23 dubia | 6 54 ¹ / ₂ |

| | Inter ♄ & cor ♄ | |
|------|---------------------|------|
| 7 3 | 20 57 $\frac{1}{2}$ | 6 54 |
| 7 5 | 20 58 <i>dubia</i> | 6 54 |
| 7 8 | 20 57 $\frac{3}{4}$ | 6 54 |
| 7 11 | 20 57 | 6 54 |
| 7 13 | 20 58 | 6 54 |
| 7 16 | 20 58 $\frac{1}{2}$ | |

Potes insensibiliter vti 20 57 $\frac{1}{2}$ inter ♄ & cor ♄¹.

Alt. ♄ meridiana 40 59

DIE 2 DECEMBRIS.

Nota. Non erat serenum, sed inter nubes fiebat obſeruatio.

5 48 Declin. ♄ 6 10 $\frac{3}{4}$ Non longe a

5 52 6 10 $\frac{1}{2}$ merid. erat

5 56 6 10 $\frac{3}{4}$ tunc ♄

Alt. ♄ Merid. 40 17 $\frac{1}{2}$

34 5

6 12 Hæc diuerſitas propter nubes.

DIE 5 DECEMBRIS.

Mane primo corrigebatur Horologium ad cor ♄ H. 5 M. 27 $\frac{1}{3}$ vt illud recte ſe haberet.

Poſtea obſeruabatur ♄ in hunc qui ſequitur modum.

5 37 Declinatio ♄ 6 6

5 38 Inter Iouem & cor ♄ 23 16 $\frac{1}{3}$

5 40 $\frac{1}{2}$ Eadem diſt. repetit. 23 15

5 42 $\frac{3}{4}$ Eadem diſt. repet. 23 15 $\frac{2}{3}$

5 42 $\frac{5}{6}$ Tranſiuit ♄ Merid. habens Alt. 40 11 $\frac{1}{2}$

5 50 $\frac{1}{2}$ Inter ♄ & cor ♄ 23 15 $\frac{1}{2}$

Fuit eodem tempore decl. ♄ 6 5 $\frac{2}{3}$ altero 6 6

5 54 Repet. diſt. inter ♄ & cor ♄ 23 15 $\frac{1}{2}$ bona

7 10 $\frac{1}{2}$ Inter ♄ & Spicam ♄ 30 54

Fuit tunc declin. ♄ vno 6 6 $\frac{1}{2}$ alt. 6 6

7 13 Inter ♄ & Spicam 30 54 $\frac{1}{6}$

7 15 $\frac{1}{2}$ Eadem diſt. repet. 30 54 $\frac{1}{2}$

Declin. ♄ 6 6 $\frac{1}{2}$ alt. 6 6 $\frac{1}{2}$

Hinc poterit ♄ locus per vtramque obſeruationem vtrinque factam certo conſtitui, conſultius vero fuerit in di-

ſtantia a corde ♄ aſumere partes 23 M. 15 $\frac{1}{2}$. In altera vero a Spica part. 30 M. 54 $\frac{1}{4}$, atque hinc locum eius vice verſa comprobare.

DIE 6 DECEMBRIS.

♄ erat paululum Meridianum prætergreſſus. Hora 5 $\frac{1}{3}$ rectificabatur Horologium.

5 43 $\frac{1}{3}$ Inter ♄ & cor ♄ 23 20 $\frac{1}{6}$

5 48 Declin. ♄ 6 4 $\frac{2}{3}$ altero 6 5

5 51 $\frac{1}{3}$ Repet. diſt. int. ♄ & cor ♄ 23 19 $\frac{5}{6}$

Decl. ♄ vtroque pin. 6 5

5 54 $\frac{1}{2}$ Inter ♄ & cor ♄ 23 19 $\frac{1}{2}$

5 57 $\frac{5}{6}$ Eadem diſt. 23 20 $\frac{1}{3}$

5 59 $\frac{1}{3}$ Eadem diſt. 23 20

6 41 $\frac{5}{6}$ Inter ♄ & Spicam ♄ 30 50 $\frac{1}{4}$

6 45 $\frac{3}{4}$ Eadem diſt. 30 50 $\frac{1}{4}$

6 47 $\frac{5}{6}$ 30 50

7 4 30 50 $\frac{5}{6}$

7 6 30 49 $\frac{1}{2}$

7 9 $\frac{1}{6}$ 30 49 $\frac{1}{3}$

7 15 $\frac{1}{2}$ 30 50

Fuit Declin. ♄ circa hæc tempora 6 5

Potes diſtantia ♄ a Spica vti 30 50

DIE 7 DECEMBRIS, MANE.

Horologium emendabatur H. 5 $\frac{1}{2}$. H. 5 M. 35 $\frac{1}{2}$ Mane tranſiuit ♄ Merid. habens Alt. per Chalyb. 40 11 per Volub. 40 10

Inter ♄ & cor ♄

7 35 $\frac{1}{2}$ 23 22 $\frac{1}{4}$ Potes in his

7 39 $\frac{1}{2}$ 23 22 $\frac{1}{2}$

7 44 23 23 omnibus vti

7 46 $\frac{1}{3}$ 23 22 $\frac{1}{4}$ diſtantia 23 22 $\frac{1}{2}$

7 49 $\frac{1}{2}$ 23 22 $\frac{1}{2}$

Declin. autem ♄ erat vbique 6 5 Borea.

Poſtea obſeruauimus inter ♄ & Spicam

7 54 30 46 Potes vti diſtantia

7 57 30 46 $\frac{1}{2}$ 30 46 tuto, &

8 1 30 46 declinatione

8 4 30 46 vt prius.

DIE 28 DECEMBRIS MANE.

H. 7 48' Declin. ♄ 6 2

6 2 $\frac{1}{4}$

¹ Diſtantias Iouis et Veneris infra inter obſeruationes Veneris inuenies.

OBSERVATIONES MARTIS.

DIE 12 FEBRUARIJ.

Obferuabatur ♂ antequam occideret Heliace, Vesperis.

| | Inter ♂ & Luc. √ | Declin. ♂ Auf. | Alt. ♂ |
|------|---------------------|-------------------|------------|
| 6 20 | 39 51 | 4 45½ | quasi 4 G. |
| 6 32 | 39 50 | 4 45 | 3 18 |
| | | Azim. ♂ occ. | |
| 6 35 | 39 49 | 80 5 | 2 45 |
| 6 40 | 39 48 | | |

Ad diem 12 Februarij¹.

Ad cognoscendam inclinationem minimam latitudinis ♂ iuxta ♂ cum ☉ inuestigabatur locus eius ex antecedentibus obseruationibus diei 12 Februarij.

| | |
|---|------------|
| H. 6 M. 20 vespertina | |
| Dift. ♂ a lucida √ | 39° 51' |
| Declin. ♂ | 3 15½ M. |
| Declin. luc. √ | 21 29¼ |
| Afc. R. √ | 26 2¼ |
| Angulus diff. ascenf. | 31 55½ |
| Ergo Afc. R. ♂ | 354 7 |
| Resp. Longitudo | 23 18½) |
| Latitudo | 0 39 M. |
| et hoc sine consideratione refractionis in altit. 4 grad. | |
| Resp. refraction in circulo altit. | 11' |
| Parallaxis | 1 30" |
| Differentia | 9 30 |
| Resp. in long. 8' subtr. | |
| in latit. 5' add. | |
| Vera itaque Longitudo | 23° 10½') |
| Latitudo | 0 44 M. |

DIE 15 OCTOBRIS MANE².

| Cor ☉ a Mer. ad ort. | Resp in. tempore | Decl. ♂ Bor. | Alt. ♂ |
|-------------------------|------------------------|------------------------------|--------|
| 53 37 | 4 ^h 16' 20" | vno 9 6½ | 19 5 |
| | | alt. 9 7 | |
| | | Inter ♂ & cor ☉ per Sext. | |
| 50 37 | 4 28½ | 16 14 | 20 59 |
| 48 40 | 4 36 | 16 13 | 21 44 |
| 47 34 | 4 40½ | 16 15½ | |
| | | 16 13 | |

| | | | |
|---------------------------------------|-------|--------|------------|
| 46 42 | 4 44 | 16 15 | 22 57 |
| | | 16 15 | N. B. Erat |
| 45 52 | 4 47½ | 16 15½ | ferenius. |
| | | 16 15½ | |
| Repetita declin. ♂ B. 9 5½ | | | |
| altero 9 5 | | | |
| Dift. æquatoria inter ♂ & cor ☉ 15 49 | | | |
| semel accepta. | | | |

DIE 17 OCTOBRIS.

Mane ante ortum ☉^{is} iuxta 6^{am} matutinam apparuit visibilis coniunctio ♃ & ♂, nam linea recta per eos ducta incidebat in stellam polarem, vel paulo infra, non enim licuit propter auroram certo attendere, erat autem ♃ meridionalior ipso ♂ ad quantitatem diametri ☾ vel ad minimum per dimidium gradum. Iuxta calculum Prutenicum debuit corporalis eorum ♂ fieri & ♃ deberet 4 scrupul. esse Marte borealior, cum fuerit australior, vt dixi, ad diametrum lunarem.

| | |
|--------------------------------|------|
| ♃ aliquantulum occidentalior ♂ | |
| diftabat ab eo in | 0 34 |
| distantia per | 0 32 |
| Radium accepta | 0 34 |
| Non satis certa | 0 29 |
| propter auroram | 0 34 |

DIE 6 NOUEMBRIS.

| Tempus correct. | Dift. ♂ a corde ☉ | Decl. ♂ | Alt. ♂ | Azim. ♂ |
|--------------------|----------------------|---------|--------|---------|
| 6 44 | 29 10½ | 4 10 B. | 35 23 | |
| 6 48 | 29 9¾ | 4 10¼ | 35 38 | 25 40 |
| 6 51 | 29 9¾ | 4 10 | 35 50 | 25 0 |

DIE 10 NOUEMBRIS.

Tempora correctæ

| | | | | |
|------|---------|--------|---------|-------|
| 6 31 | Inter ♂ | 31 26¾ | Decl. ♂ | 3 16½ |
| 6 36 | & cor | 31 27 | | 3 16½ |
| 6 40 | ☉ | 31 27 | | 3 16 |

Mars fuit satis altus iuxta has obseruationes, ita vt nullam suggereret refractionem.

Quando Sol fuit vno gradu ante meridianum, erant in Horologio 57½, ergo

¹ E codice V. Cfr. T. V p. 336.

² De loco Martis hoc die vide supra sub obseruationibus Iovis p. 273.

saltem vnico minuto iusto celerius mouebatur ab hora 9 quando corrigebatur in meridiano.

DIE 5 DECEMBRIS, MANE.

H. 5 M. 27 $\frac{1}{2}$ corrigebatur Horologium ad cor Ω .

| | | | | |
|---|------------------|-------------------------------------|----|------------------|
| 5 | 57 $\frac{1}{2}$ | Inter σ & cor Ω | 45 | 17 $\frac{1}{2}$ |
| 6 | 3 $\frac{1}{2}$ | Declin. σ ad Auft. | 2 | 4 $\frac{1}{2}$ |
| 6 | 3 $\frac{5}{8}$ | Dist. inter σ & cor Ω | 45 | 17 $\frac{1}{4}$ |
| 6 | 7 $\frac{3}{4}$ | Decl. σ repet. alt. pin. | 2 | 4 $\frac{5}{8}$ |
| 6 | 12 $\frac{1}{2}$ | Dist. σ & cordis Ω | 45 | 16 $\frac{3}{4}$ |
| 6 | 15 | Dist. eadem | 45 | 17 $\frac{1}{8}$ |
| 6 | 15 $\frac{1}{2}$ | Declin. σ | 2 | 5 |

Calculus¹ longitudinis et latitudinis Martis ad 5 Decembris pro cognoscenda inclinatione planorum eius loci. Nam Mars propemodum in æquali remotione fuit a Sole et a Terra.

H. 6 mane. Alt. σ 31 $\frac{1}{2}$, Parall. 1 $\frac{1}{2}$, Long. 1, Lat. 1 $\frac{1}{2}$.

Distantia σ a corde Ω 45° 16'

Declin. cordis per parallaxin correctā 13 58 S.
Declinatio 2 3 M.

A. R. cordis Ω 146 55

Angulus diff. ascenf. 42 43 30

Ergo Asc. R. Martis 189 38 30

Resp. Longitudo 9 40 Ω

Latitudo 1 57 Sept.

DIE 7 DECEMBRIS.

Hora 5 $\frac{1}{2}$ Horologium emendabatur.

Obferuabatur etiam hoc die σ circa horam 7 $\frac{1}{4}$ matutinam & distabat a corde Ω partib. 46 Min. 23, habens declin. 2 29 $\frac{1}{2}$ mer.

DIE 15 DECEMBRIS, MANE.

Hora 5 $\frac{1}{2}$ verificabatur Horologium.

6 4 $\frac{1}{8}$ Inter σ & cor Ω 50 30

| | | | | |
|---|------------------|--|----|------------------|
| 6 | 9 $\frac{1}{2}$ | Eadem dist. | 50 | 30 $\frac{1}{2}$ |
| 6 | 17 $\frac{1}{8}$ | Eadem | 50 | 30 $\frac{1}{8}$ |
| 6 | 40 | Transfuit σ stella Meridianum, habens altitudinem | 30 | 3 |
| | | altero | 30 | 1 $\frac{1}{2}$ |
| 6 | 46 $\frac{5}{8}$ | Transfuit Spica \mathbb{M} Merid. | | |

DIE 16 DECEMBRIS, MANE.

H. 6 $\frac{1}{8}$ verificabatur Horologium.

| | | | | |
|---|------------------|--|-----|------------------|
| 6 | 37 $\frac{1}{8}$ | Alt. σ Merid. per Q. Mural. | | |
| | | vno | 29 | 50 $\frac{1}{2}$ |
| | | altero | 29 | 50 $\frac{1}{4}$ |
| | | per Chalyb. | 29 | 50 35 |
| | | per Volub. | 29 | 50 20 |
| 6 | 42 $\frac{1}{2}$ | transfuit Spica Merid., habens Alt. per Volub. | 25 | 8 |
| | | per Chalyb. | 25 | 8 $\frac{1}{2}$ |
| | | per Mural. | vno | 25 7 40 |
| | | altero | 25 | 8 |

DIE 18 DECEMBRIS.

H. 6 32 $\frac{1}{2}$ ' Mane σ in Merid., Alt. per Chalyb. 29 27 45

DIE 27 DECEMBRIS A. M.

Mane obseruabatur σ transiens Merid., habuitque Alt.

per Mural. 27 49 $\frac{1}{8}$

per Chalyb. 27 49

per Volub. 27 48 $\frac{5}{8}$

Declin. eius vno pin. 6 16 $\frac{1}{2}$
alt. 6 16 $\frac{1}{3}$

6 59 Inter σ & borealiorem trium in fronte \mathbb{M} 36 49 $\frac{1}{8}$

7 2 Inter σ & supremam frontis \mathbb{M} 36 46 dubia

7 4 Eadem repetita 36 48 $\frac{1}{2}$

7 8 Eadem repetita 36 48

7 13 $\frac{1}{2}$ Inter σ & caudam Ω 35 54 } bo-næ

7 16 Eadem repetita 35 54 $\frac{1}{8}$

¹ E codice V. Manu Kepleri.

OBSERVATIONES VENERIS.

DIE 12 FEBRUARIJ P. M.

| | | Decl. ♀ Auf. | Alt. ♀ |
|---------------------------------|----------------------------------|--------------------------------------|----------------------------------|
| 5 ^H 40' | | vno 5 31 ⁵ / ₈ | 6 45 |
| | | alt. 5 32 | |
| 5 45 | | 5 31 ¹ / ₄ | 6 10 |
| 5 47 | | 5 31 | 5 54 |
| | Inter ♀ & luc. √ per Sext. Δ | Az. ♀ occ. per Volub. | Alt. ♀ |
| 5 57 | 44 2 ³ / ₄ | 72 40 | 4 56 ¹ / ₂ |
| 5 59 | 44 2 | 73 20 | 4 33 |
| 6 3 ¹ / ₂ | 44 1 ¹ / ₄ | 74 3 | 4 6 |
| 6 5 | Decl. ♀ M. | 5 27 ³ / ₄ | 3 50 |

Pro loco ♀ die 12 Februarij¹.

| | |
|----------------------------------|-----------------------|
| H. 6 completa Dist. ♀ | |
| a lucida ♀ | 44° 2' |
| Alt. ♀ 4 $\frac{1}{2}$ ° Decl. ♀ | 5 29 M. |
| Decl. luc. ♀ | 21 29 B. |
| Angulus diff. ascenf. | 35 31 |
| Afc. R. luc. ♀ | 26 2 15'' |
| Iccirco Afc. R. ♀ | 350 31 15 |
| Resp. Longitudo | 19 8 $\frac{2}{3}$) |
| Latitudo | 1 16 $\frac{1}{4}$ B. |

Pro refractione et parallaxi.

| | |
|--|-------------|
| Dist. ♀ a Terra iuxta Cop. 1848 semid. | |
| Resp. Parallaxis in alt. 4 $\frac{1}{2}$ | 1' 50'' |
| Refraction | 10 40 |
| Differentia | 8 50 |
| Resp. in Longit. | 7' 0'' |
| Latit. | 5 10 subtr. |
| Vera Longitudo 19° 1' 40'') | |
| ♀ Latitudo | 1 11 0 B. |

DIE 25 FEBRUARIJ.

| | |
|---|---------------------|
| 6 30 Inter ♀ & luc. ♀ | 28 43 $\frac{2}{3}$ |
| Alt. ♀ | 6 45 |
| ♀ a luc. ♀ 28 42 $\frac{1}{4}$, Alt. ♀ | 5 44 |
| Decl. ♀ | 1 14 B. |
| Repetita | 1 14 $\frac{1}{2}$ |

DIE 27 FEBRUARIJ.

Nota. Hæ & antecedentes ♀ observationes fuerunt postquam vesperti orta esset e radijs Solis.

¹ E codice V.

| | Inter ♀ & luc. ♀ | Decl. ♀ B. | Alt. ♀ |
|------|---------------------|-------------------------|--------|
| 6 14 | | 2 13 | 9 23 |
| | | alt. 2 13 $\frac{1}{4}$ | |
| 6 23 | 26 26 $\frac{1}{2}$ | | |
| 6 27 | 26 26 | 2 14 | 7 42 |
| 6 30 | 26 25 $\frac{1}{2}$ | 2 14 $\frac{1}{2}$ | 7 15 |
| 6 32 | 26 25 | 2 14 $\frac{1}{2}$ | 7 0 |

Tempora assignata sunt correctæ.

7^H 8' 10'' transiit luc. ped. II per Mer.
8 3 48 transiit super. caput II.

Hinc colligitur horologium 13 M. iusto velocius a Meridie proximo promotum esse, vnde tot minutis retractus est index.

8 0 35 transf. inf. cap. II, debebat autem transire 8 1 56, vnde index 1' 21'' promouebatur.

DIE 29 FEBRUARIJ P. M.

| | Inter ♀ & ocul. ♀ per Sext. | Alt. ♀ per Volub. | Azim. occ. | Decl. ♀ B. per Arm. |
|--------------------|-----------------------------|--------------------|------------|---------------------|
| 6 34 | 53 59 $\frac{3}{4}$ | 8 3 | 84 0 | 3 17 |
| 6 38 $\frac{1}{2}$ | 53 59 | 7 30 $\frac{1}{2}$ | 84 50 | 3 17 |
| 6 42 | 53 57 $\frac{3}{4}$ | 7 1 $\frac{3}{4}$ | 85 32 | 3 17 $\frac{1}{3}$ |
| 6 44 | 53 57 $\frac{1}{4}$ | 6 40 $\frac{2}{3}$ | 86 2 | 3 17 $\frac{2}{3}$ |

Tempora sunt verificata.

6 56' 13'' transiisse lucida pedum II per merid., vnde horolog. corrigi potest.

7 48 $\frac{1}{3}$ transf. ceruix can. min. merid.
10 33 20 transiit cor Ω merid. pro horologio corrigendo.

DIE 1 MARTIJ P. M.

| | |
|----------------------------|---------------------|
| 6 49 35 Dist. æquat. inter | 52 18 $\frac{1}{2}$ |
| 6 53 0 ♀ & oculum ♀ | 52 18 $\frac{3}{4}$ |
| 6 56 per Armillas | 52 17 $\frac{1}{4}$ |
| 6 57 Decl. ♀ Bor. | 3 51 |
| 6 58 Dist. ♀ & oculi ♀ | |
| per Sext. Δ veterem | 52 41 |
| Altitudo ♀ | 5 0 |
| 7 1 Decl. ♀ Bor. | 3 52 $\frac{1}{2}$ |
| 7 3 Dist. inter ♀ & | 52 40 $\frac{2}{3}$ |
| 7 6 Aldeb. per Sext. | 52 39 |

Locus ♀ ex obseruationibus
diei 1 Martij¹.

H. 6 M. 58 Dist. ♀ ab Aldeb. 52° 41'
Altit. ♀ 6° Declin. ♀ 3 51 B.
Declin. Aldeb. 25 36
Asc. R. Aldeb. 63 5 20
Ang. diff. ascenf. 52 15³/₄
Ergo Asc. R. ♀ 10 49 30
Resp. Longitudo 11 27¹/₆ V
Latitudo 0 44 30 M.

DIE 28 MARTIJ.

H. 3¹/₂ Declin. ♀ 16 27 B.
Repetita 16 27¹/₂
☉ occid. 58 30 16 28¹/₂
60 0 16 28
79 30 16 29
16 30

Inter ♀ & ☉
{ 81 58 26 22¹/₂ Alt. ☉ 10 29¹/₂
{ Resp. H. 5 28' Azim. 87 19

Oculus ♀
ab ortu Decl. ♀ Alt. ♀
157 7 vno 16 31³/₄ 14 35
alt. 16 31⁵/₆

Inter ♀ & oc. ☉
per Sext.
7 42 159 12 20 22 13 30
7 45¹/₂ 160 5 20 20
7 49¹/₃ 161 1 20 19
7 51 161 32 20 18⁵/₆
7 54¹/₂ 162 16 20 17¹/₂
16 33¹/₃
Repetita 16 33¹/₂

Inter ♀ & luc.
hum. Orion.
8 1¹/₃ 164 2 41 19
8 3¹/₃ 164 27 41 18³/₄ 16 34⁵/₆

DIE 29 MARTIJ.

| ☉ occ. ab ortu | Resp. tempus | Inter ♀ & ☉ | Azim. ☉ | Per Volubilem ☉ occ. Alt. ☉ |
|-------------------|----------------------------------|-----------------------------------|---------|-----------------------------------|
| 152 25 | 4 9 ¹ / ₃ | 26 40 | 70 38 | 21 30 |
| | | 26 40 ¹ / ₆ | | 20 39 ¹ / ₂ |
| 155 0 | 4 20 | | | 20 20 |
| 156 10 | 4 25 | 26 41 ³ / ₄ | | 19 dubia |
| 157 7 | 4 28 ¹ / ₂ | 26 40 | 75 5 | 18 50 |

¹ E codice V.

| Oculus ♀ ab ortu | Resp. Tempus | Inter ♀ & oc. ☉ | Decl. ♀ per Q. min. | Alt. ♀ |
|------------------------------------|-----------------|--------------------|-----------------------------------|--------|
| 171 50 | 8 29 | 19 10 | 16 59 ¹ / ₂ | 7 20 |
| 172 39 ¹ / ₂ | 8 32 | 19 9 | 16 59 ⁵ / ₆ | 7 8 |

| | Inter ♀ & luc. hum. Or. | Decl. ♀ | Alt. ♀ |
|--------|----------------------------------|-----------------------------------|--|
| 173 29 | 8 35 ¹ / ₂ | 40 12 ¹ / ₄ | 17 0 6 ¹ / ₂ |
| | | 40 12 ¹ / ₂ | 17 0 ¹ / ₃ 6 10 |
| | | 40 12 ¹ / ₂ | 17 0 ¹ / ₃ 5 ¹ / ₂ |

DIE 30 MARTIJ.

| ☉ ab ortu | ♀ a ☉ | Decl. ♀ | Alt. ☉ |
|----------------------------------|--------|-----------------------------------|-----------------------------------|
| 4 34 ¹ / ₂ | 158 37 | 17 15 | |
| 4 38 ¹ / ₂ | 159 40 | 17 15 ¹ / ₂ | |
| 4 42 ¹ / ₃ | 160 38 | 26 57 ¹ / ₆ | 17 6 |
| 4 51 ¹ / ₃ | 162 50 | 26 55 | 16 57 ¹ / ₂ |
| 4 52 | 163 5 | 26 56 | 16 0 |
| 4 55 ¹ / ₂ | 163 53 | 26 54 | 15 22 |
| 4 57 | 164 10 | 26 55 | 15 15 |

N. B. Erat ☉ inter rariusculas nubes.

| Dext. hum. Or. ab ort. | Inter ♀ & hum. Or. | Decl. ♀ | Alt. ♀ |
|----------------------------------|-----------------------|-----------------------------------|--|
| 7 31 ¹ / ₂ | 138 5 | 39 13 ¹ / ₄ | 17 20 ¹ / ₃ 16 2 ¹ / ₂ |
| 7 33 | 138 42 | 39 12 ³ / ₄ | 17 20 ¹ / ₃ 15 32 |
| 7 37 | 139 37 | 39 12 | 17 20 ¹ / ₂ 15 0 |
| 7 41 | 140 33 | 39 12 | 17 20 ¹ / ₂ 14 0 |

| | Inter ♀ & ocul. ☉ | Decl. ♀ | Alt. ♀ |
|----------------------------------|----------------------|-----------------------------------|--|
| | 141 24 | 18 2 ¹ / ₄ | 17 20 ² / ₃ 13 ¹ / ₂ |
| 7 48 | 142 20 | 18 2 ¹ / ₂ | 17 21 13 ¹ / ₄ |
| 7 51 | 143 3 | 18 1 ¹ / ₄ | 17 21 ¹ / ₃ 13 |
| 7 53 ³ / ₄ | 143 44 | 18 1 ¹ / ₂ | 17 21 ³ / ₄ 12 ³ / ₄ |
| 7 56 | 144 15 | 18 1 ¹ / ₂ | 17 22 12 ¹ / ₄ |
| 7 59 | 145 1 | 18 1 | 17 22 ¹ / ₂ 12 |
| 8 50 ¹ / ₄ | 157 56 | 17 58 ¹ / ₂ | 17 27 5 0 |
| 8 53 | 158 37 | 17 57 | 17 27 ¹ / ₃ 4 40 |
| 8 56 | 159 21 | 17 56 ¹ / ₂ | 17 28 4 20 |

DIE 5 APRILIS P. M.

| ☉ ab ortu | Inter ☉ & ♀ per Sext. | Decl. ♀ B. | Alt. ☉ | Azim. ☉ |
|----------------------------------|------------------------------------|-----------------------------------|-----------------------------------|---------|
| 2 36 ¹ / ₃ | 129 5 | 19 27 ¹ / ₂ | | |
| 3 13 | 138 15 | 19 27 ¹ / ₂ | | |
| 3 52 8 | 148 2 | 28 20 ³ / ₄ | 25 45 | 68 24 |
| 3 56 ³ / ₄ | 149 10 | 28 20 ¹ / ₄ | 25 10 | 69 30 |
| 3 59 ¹ / ₂ | 149 55 | 28 21 | 24 48 ¹ / ₂ | 70 8 |
| 4 3 22 | 150 50 ¹ / ₂ | 28 19 ³ / ₄ | 24 17 ¹ / ₂ | 71 4 |
| 4 6 4 | 151 31 | 28 20 ¹ / ₂ | 23 56 ¹ / ₂ | 71 49 |
| 4 9 | 152 15 | 28 19 | 23 33 | 72 18 |
| 4 11 ¹ / ₃ | 152 50 | 28 19 ³ / ₄ | 23 14 | 72 50 |
| 4 12 54 | 153 13 ¹ / ₂ | 28 20 ¹ / ₄ | 23 0 ¹ / ₂ | 73 12 |

DIE 16 APRILIS P. M.

Declin. ♀ ab initio 22 42 B.

| | ☉ ab ortu | Diff. ♀ & ☉ per Sext. | Alt. ☉ per Q. min. | Az. occ. |
|--------------------|----------------------|--------------------------|--------------------------|----------|
| 2 15 $\frac{3}{8}$ | 123 55 | 30 50 $\frac{1}{2}$ | 40 27 | 45 15 |
| 2 26 $\frac{1}{2}$ | 126 38 | 30 52 | 39 17 | 48 34 |
| 2 33 $\frac{1}{8}$ | 128 27 $\frac{1}{2}$ | 30 52 $\frac{1}{2}$ | 38 28 | 50 41 |
| 2 42 $\frac{1}{8}$ | 130 35 | 30 52 | 37 31 $\frac{1}{2}$ | 53 6 |
| 2 56 $\frac{1}{2}$ | 134 8 | 30 52 $\frac{3}{4}$ | 35 53 | 56 55 |
| 3 10 $\frac{3}{8}$ | 137 40 $\frac{1}{2}$ | 30 53 $\frac{1}{4}$ | 34 11 $\frac{1}{2}$ | 60 32 |
| 3 18 | 139 28 | 30 54 | 33 24 | 62 20 |
| 3 19 $\frac{3}{8}$ | 139 56 | | | |
| 3 21 | 140 16 $\frac{1}{2}$ | | | |

Decl. ♀ B. 22 43 $\frac{1}{8}$
22 43 $\frac{3}{4}$

Ipse obseruauit.

| | | | |
|--------------------|---------------------|---------------------|---------------------|
| 3 29 $\frac{3}{8}$ | 142 24 | 30 52 $\frac{3}{4}$ | 32 2 |
| 3 33 $\frac{1}{8}$ | 143 20 | 30 53 | 31 35 |
| 3 36 $\frac{1}{2}$ | 144 5 | 30 52 $\frac{5}{8}$ | 31 7 |
| 3 40 $\frac{1}{2}$ | 145 7 | 30 52 $\frac{5}{8}$ | 30 24 |
| 3 47 $\frac{1}{8}$ | 146 58 | 30 53 | 29 30 |
| 3 51 $\frac{3}{8}$ | 147 55 | 30 52 $\frac{3}{4}$ | 28 59 |
| 3 55 | 148 45 | 30 52 $\frac{5}{8}$ | 28 34 |
| 3 57 $\frac{1}{8}$ | 149 18 | | |
| 4 2 | 150 0 $\frac{1}{2}$ | | |
| 4 21 $\frac{5}{8}$ | 155 28 | 30 52 $\frac{5}{8}$ | 24 56 |
| 4 26 $\frac{3}{8}$ | 156 41 | 30 53 $\frac{1}{4}$ | 24 21 |
| 4 45 $\frac{1}{2}$ | 161 23 | 30 53 | 21 46 |
| 4 54 $\frac{1}{8}$ | 163 42 | 30 53 $\frac{1}{2}$ | 20 25 $\frac{1}{6}$ |
| 5 1 $\frac{1}{8}$ | 165 17 | 30 53 | 19 29 |
| 5 6 $\frac{1}{8}$ | 166 32 | 30 53 $\frac{1}{8}$ | 18 37 $\frac{1}{2}$ |
| 5 14 | 168 30 | 30 53 $\frac{1}{2}$ | 17 42 $\frac{1}{2}$ |
| 5 26 | 171 28 | 30 53 $\frac{1}{4}$ | 16 6 $\frac{1}{2}$ |
| 5 29 $\frac{1}{2}$ | 172 22 | 30 53 $\frac{5}{8}$ | 15 33 $\frac{1}{2}$ |
| 5 43 | 175 45 | 30 52 $\frac{3}{4}$ | 13 38 |
| 5 50 $\frac{1}{8}$ | 177 34 | | 12 36 $\frac{1}{3}$ |
| 5 56 $\frac{3}{8}$ | 179 10 | 30 52 $\frac{1}{2}$ | 11 45 $\frac{1}{6}$ |

Med. Cœli
ex Globo

| | | | |
|--------------------|--------|---------------------|-------|
| 6 4 | 125 14 | 30 52 $\frac{2}{3}$ | 10 50 |
| 6 11 | 127 4 | 30 53 | 9 50 |
| 6 19 | 129 1 | 30 53 $\frac{1}{2}$ | 8 50 |
| 6 25 $\frac{1}{2}$ | 130 38 | 30 51 $\frac{5}{8}$ | 8 0 |
| 6 33 $\frac{3}{8}$ | 132 41 | 30 50 $\frac{1}{2}$ | 7 5 |
| 6 42 | 134 50 | 30 50 $\frac{1}{3}$ | 5 45 |
| 6 48 $\frac{1}{2}$ | 136 24 | 30 51 | 5 0 |
| | | 30 48 $\frac{1}{2}$ | 4 15 |
| | | 30 48 | 3 50 |
| | | 30 48 | 3 30 |
| | | 30 47 $\frac{1}{3}$ | 3 10 |
| | | 30 46 $\frac{5}{8}$ | 3 0 |

| | |
|---------------------|------|
| 30 46 $\frac{1}{2}$ | 2 50 |
| 30 46 $\frac{1}{2}$ | 2 30 |
| 30 41 $\frac{1}{2}$ | 1 45 |
| 30 42 $\frac{1}{2}$ | 1 30 |
| 30 41 | 1 15 |
| 30 39 $\frac{3}{8}$ | 1 5 |
| 30 39 $\frac{3}{8}$ | 1 0 |
| 30 37 $\frac{3}{4}$ | 0 50 |
| 30 37 | 0 40 |
| 30 36 $\frac{2}{3}$ | 0 35 |
| 30 35 | 0 30 |

7 24 Decl. ♀ in occasu ☉ 22 46 $\frac{1}{2}$

Alt. ♀ 24 G. 22 47 B.

Postea post occasum ☉ ♀ a stellis.

Quando ♀ habuit altitud. 18 40

distabat ab inferiori capite II 40 16

| Cor ☉ ab ortu | H. M. | Alt. ♀ | Diff. ♀ ab inf. cap. II |
|------------------|--------------------|---------------|------------------------------|
| | | 18 10 | 40 16 |
| 100 18 | 8 10 | 17 20 | 40 15 |
| 100 51 | 8 13 | 17 0 | 40 16 $\frac{1}{4}$ |
| 102 25 | 8 18 $\frac{1}{2}$ | 16 40 | 40 15 $\frac{5}{8}$ |
| | | 16 20 | 40 15 $\frac{1}{2}$ |
| 103 48 | 8 24 | 16 0 | 40 15 $\frac{3}{8}$ |
| 104 31 | 8 27 | 15 30 Decl. ♀ | 22 48 $\frac{1}{4}$ |
| | | | Diff. ♀ a luc. pede II |
| 105 41 | 8 33 | 15 0 | 27 3 $\frac{1}{6}$ |
| 106 16 | 8 34 | 14 30 | 27 3 $\frac{1}{4}$ |
| 106 55 | 8 37 | 14 15 | 27 3 $\frac{1}{2}$ |
| 107 27 | 8 39 | 14 0 | 27 3 $\frac{2}{3}$ |

Rursus ♀ ab inferiori cap. II

| | | | |
|--------|------|--------------------------------|---------------------|
| 108 6 | 8 41 | 13 40 | 40 15 |
| 108 47 | 8 44 | 13 10 | 40 15 |
| 109 20 | 8 46 | 13 0 | 40 14 |
| 109 5 | 8 49 | 12 45 | 40 13 $\frac{1}{2}$ |
| 111 0 | 8 53 | 12 10 | 40 13 $\frac{3}{4}$ |
| 111 25 | 8 54 | 12 0 Decl. 22 49 $\frac{3}{4}$ | |
| 111 50 | 8 56 | 11 50 | 22 50 |

Pro examinando instrumento lucidus pes Eretonij supra ♀ proxime, declinatio 28° 11' bis.

Vt constaret vera declinatio ♀ obseruabatur lucidus pes Eretonij versus eandem cœli plagam qua ♀ non longe supra ipsam, & ter reperiebatur eius declinatio 28 11 vtroque pinna-cidio, quantum igitur hic vel defunt vel abundant, tantundem & in ♀.

Rurfus ♀ obseruabatur.

| Luc. Hydræ ab ortu | H. M. | Alt. ♀ | Decl. ♀ |
|--------------------------|--------------------|-----------------|-----------------------------|
| 128 5 | 9 22 $\frac{1}{3}$ | 8 $\frac{1}{2}$ | 22 51 |
| | | | Dift. ♀ ab inf. II |
| 128 50 | 9 26 | 8 0 | 40 11 $\frac{1}{3}$ |
| 129 37 | 9 28 $\frac{1}{2}$ | 7 50 | 40 11 |
| 129 59 | 9 30 | 7 40 | 40 10 |
| 130 15 | 9 31 | 7 25 | 40 9 $\frac{3}{4}$ |
| 130 30 | 9 32 | 7 15 | Decl. ♀ 22 51 $\frac{3}{4}$ |

N. B. Vt constare poſſet de certitudine Sextantis vtrum is recte se haberet an vere aliquo casu per accidens detrimento aut vitio alicui fuerit obnoxius, accepimus postea distantiam cordis \odot & inferioris capitis II ter in hunc modum.

Inter cor \odot & inf. cap. II I 37 1 $\frac{5}{6}$
II 37 1 $\frac{3}{4}$
III 37 1 $\frac{5}{6}$

At ex alijs obseruationibus præcedentium annorum inuenimus harum duarum stellarum distantiam esse saltem complete graduum 37 $^{\circ}$ 0' vel adhuc paulo minus, vt ob id in 2 scrupulis sextans videatur minus ratas exhibuisse distantias, quæ vbique auferenda veniunt.

Fuit autem in omnibus antecedentibus obseruationibus satis serenum, & fuerunt satis diligentes, vt tuto te ijs poſſis fundare, modo corrigatur vitium instrumenti.

DIE 17 APRILIS P. M.

\odot ab ortu 111 30, Declin. ♀ antequam peruenit ad Merid. 22 56 $\frac{3}{4}$ B.

\odot ab ortu 123 10, ♀ per Meridianum habens Altit. per Chalyb. 57 1 $\frac{1}{2}$
per Volub. 57 2 $\frac{1}{8}$

Canis minor a merid. 54 45
Declin. ♀ 22 59
Dift. inter. ♀ & Mer. cap. II 39 3 $\frac{1}{4}$
Altit. ♀ 15 10

| Can. min. a Merid. | Tempus resp. | Dift. ♀ a Mer. cap. II | Alt. ♀ | Decl. ♀ |
|----------------------------|-----------------|---------------------------|--------|-----------|
| 56 57 | 8 44 20 | 39 2 $\frac{3}{8}$ | 14 15 | 23 1 |
| 58 0 | 8 48 28 | 39 2 $\frac{1}{2}$ | 13 20 | |
| 59 25 | 8 54 4 | 39 2 $\frac{1}{8}$ | 12 25 | |
| | | ♀ a luc. pede II | | |
| 60 17 | | 25 49 | 12 0 | |
| 60 45 | | 25 50 | 11 45 | |
| 61 16 | | 25 50 $\frac{1}{2}$ | 11 25 | |
| 61 57 | | 25 49 $\frac{3}{8}$ | 11 0 | 23 1 |
| 63 56 | | | 10 0 | 23 4 |
| Paulo post, decl. repetita | | | | 9 10 23 5 |

DIE 18 APRILIS, VESPERI.

Per Sextantem veterem Δ .

| | |
|---------------------|---------------------|
| Distantia inter | 37 0 $\frac{1}{8}$ |
| cor \odot & | 37 1 |
| infer. caput II | 37 0 $\frac{1}{2}$ |
| Inter cor \odot & | 54 1 $\frac{3}{4}$ |
| Spicam III | 54 1 $\frac{5}{8}$ |
| Inter cor & | 24 40 |
| caudam \odot | 24 39 $\frac{3}{4}$ |
| | 24 39 $\frac{3}{8}$ |

Ex his tribus distantijs certo patet Sextantem se recte ad amussim habuisse cum obseruaretur ♀ a \odot , quod autem eodem tempore sero obseruata est distantia cordis \odot & infer. cap. II p. 37 M. 1 $\frac{5}{8}$ euenit propter nubes, quæ visui parum impedimento erant.

DIE 23 APRILIS P. M.

| Cor \odot a merid. | Decl. ♀ B. | Inter ♀ & infer. cap. II | Alt. ♀ |
|-------------------------|---------------------|-----------------------------|--------|
| 27 24 | 24 13 $\frac{1}{2}$ | 31 55 $\frac{1}{6}$ | 14 5 |
| 28 30 | | 31 54 $\frac{1}{2}$ | 13 20 |
| 30 9 | 24 13 $\frac{1}{2}$ | 31 54 | 12 30 |
| 31 20 | | 31 53 $\frac{1}{2}$ | 11 50 |
| | | Inter ♀ & luc. ped. II | |
| 33 8 | | 19 13 $\frac{1}{6}$ | 11 0 |
| 33 50 | 24 14 $\frac{2}{3}$ | 19 13 $\frac{1}{2}$ | 10 40 |
| 35 10 | | 19 12 $\frac{3}{4}$ | 10 0 |

DIE 25 APRILIS P. M.

| Canis minor a Merid. | Decl. ♀ B. | Inter ♀ & infer. cap. II | Alt. ♀ |
|----------------------------|------------|-----------------------------|--------|
| 68 37 | 24 33 | 29 32 | 14 10 |
| 69 32 | | 29 32 $\frac{1}{2}$ | 13 40 |
| 70 22 | | 29 33 | 13 10 |
| 70 48 | | 29 33 | 12 50 |
| 71 47 | 24 33 | | |

DIE 27 APRILIS.

| H. M. | Inter ♀ & ☉ per Sext. | Decl. ♀ | Alt. ☉ |
|--------------------|-----------------------------|---------------------|---------------------------|
| | | 24 46 $\frac{3}{4}$ | 16 40 |
| 6 22 | 33 26 $\frac{1}{2}$ | | 11 0 |
| 6 24 $\frac{1}{2}$ | 33 24 | | 10 40 |
| 6 25 | 33 23 | | 10 30 |
| 6 26 $\frac{3}{4}$ | 33 25 | | 10 20 |
| 6 44 | 33 23 | | 8 5 |
| 6 45 | 33 23 $\frac{1}{8}$ | | 7 50 |
| 6 46 | 33 23 $\frac{1}{4}$ | | 7 40 |
| 6 48 | 33 23 $\frac{1}{2}$ | | 7 30 |
| 6 49 | 33 24 | | 7 25 |
| 6 54 | | 24 48 | 7 5 |
| 6 56 | | 24 47 $\frac{1}{2}$ | 6 40 |
| Canis min. occ. | Inter ♀ & infer. cap. II | Decl. ♀ B. | Alt. ♀ |
| 9 8 | | 24 48 $\frac{5}{6}$ | 13 40 |
| 9 12 | 73 24 | 27 12 | |
| 9 13 | 73 42 | 27 12 $\frac{1}{8}$ | 13 5 |
| 9 14 $\frac{1}{3}$ | 74 0 | 27 12 $\frac{1}{4}$ | 24 49 12 45 |
| 9 16 | 74 25 | 27 11 | 12 40 |
| 9 18 | | 27 11 $\frac{1}{4}$ | 24 49 $\frac{1}{2}$ 12 30 |
| | Inter ♀ & can. min. | | |
| 9 20 | 75 18 | 33 55 $\frac{1}{2}$ | 24 49 $\frac{3}{4}$ 12 0 |
| 9 23 | 76 2 | 33 55 | 24 49 $\frac{3}{4}$ 11 45 |
| 9 25 | 76 33 | 33 55 $\frac{1}{2}$ | 24 50 11 40 |
| 9 25 $\frac{1}{2}$ | 77 4 | 33 55 $\frac{1}{8}$ | 24 50 11 20 |
| 10 2 | Alt. can. min. | 11 30 | Decl. 6 15 $\frac{1}{6}$ |

Tempora sunt hic correcta.

DIE 1 MAIJ.

☉ a Mer. 28 40, H. 2 M. 1, declin. ♀ ante
merid. per Armillas 25 7 $\frac{1}{2}$ B.
H. 2 $\frac{1}{3}$ horologium verificatum est.
H. 2 25 ♀ tranfuit merid. habens
alt. per Q. Volub. 59 13 $\frac{1}{4}$
Declin. per Armill. 25 9

| | Inter ☉ & ♀ | Decl. ♀ B. | Alt. ☉ |
|--------------------|---------------------|--------------------|------------------|
| 2 40 | 34 19 | | 41 $\frac{3}{4}$ |
| 2 42 $\frac{2}{3}$ | 34 18 | | 41 $\frac{1}{2}$ |
| 2 45 $\frac{3}{4}$ | 34 19 $\frac{1}{4}$ | | 41 15 |
| 2 49 | 34 19 $\frac{1}{2}$ | | 40 55 |
| 2 54 | 34 20 | | 40 24 |
| 2 58 | 34 19 $\frac{5}{6}$ | | 39 58 |
| 3 5 $\frac{1}{3}$ | 34 20 | | 39 19 |
| 3 10 $\frac{1}{2}$ | 34 19 $\frac{5}{6}$ | | 38 35 |
| 3 15 $\frac{2}{3}$ | | 25 8 $\frac{1}{2}$ | |
| 3 26 $\frac{2}{3}$ | 34 19 | | 36 45 |
| 3 31 $\frac{1}{6}$ | 34 19 $\frac{5}{6}$ | | 36 10 |

3 35 2" ☉ occ. 51 46 pro Horol.
verificando

| | | | |
|--------------------|---------------------|------|-------|
| 3 53 $\frac{1}{6}$ | 34 19 $\frac{3}{4}$ | | 33 40 |
| 3 57 $\frac{2}{3}$ | 34 19 $\frac{3}{4}$ | | 33 14 |
| 4 3 $\frac{1}{6}$ | 34 19 $\frac{5}{6}$ | | 32 28 |
| 4 6 | 34 20 | | 32 12 |
| 4 12 $\frac{1}{2}$ | 34 21 | | 31 18 |
| | | | dubia |
| 4 16 $\frac{1}{6}$ | 34 20 $\frac{1}{3}$ | | 30 51 |
| 4 22 | 34 20 $\frac{1}{6}$ | | 30 8 |
| 4 29 $\frac{1}{3}$ | | 25 9 | |
| 4 41 $\frac{1}{6}$ | 34 20 $\frac{1}{6}$ | | 27 45 |
| 4 45 | 34 20 $\frac{1}{3}$ | | 27 15 |

5 $\frac{1}{4}$ Horologium verificatum est ad ☉,
ab hora 2 $\frac{1}{3}$ 18 M. citius iusto moue-
batur.

| 5 19 | | 25 9 $\frac{1}{2}$ | |
|--------------------|-----------------------------|---------------------|--------------------------|
| 5 22 $\frac{2}{3}$ | 34 19 $\frac{3}{4}$ | | 20 2 |
| 5 26 $\frac{1}{2}$ | 34 20 | | 19 43 |
| 5 32 $\frac{3}{4}$ | 34 20 $\frac{1}{3}$ | | 18 43 |
| Cor ☉ occ. | Inter ♀ & infer. cap. II | Decl. ♀ | Alt. ♀ |
| 9 50 | 50 40 | 22 28 $\frac{3}{4}$ | 25 12 $\frac{5}{6}$ 9 20 |
| 9 55 | | 22 29 | 25 13 $\frac{1}{2}$ 8 40 |
| 9 57 | | 22 29 | 8 30 |
| 10 0 | | 22 28 $\frac{3}{4}$ | 8 0 |
| 10 2 | *53 30 | 22 28 | 25 14 7 50 |

DIE 2 MAIJ.

| H. M. | Cor ☉ a mer. | Inter ♀ & infer. cap. II | Decl. ♀ | Alt. ♀ |
|--------------------|-----------------|-----------------------------|---------------------|------------------|
| 9 38 | | 21 21 $\frac{5}{6}$ | 25 16 $\frac{2}{3}$ | 12 $\frac{1}{2}$ |
| 9 41 $\frac{1}{3}$ | 45 45 | 21 22 $\frac{1}{4}$ | 25 17 | 12 5 |
| 9 44 $\frac{1}{2}$ | 46 35 | 21 22 | 25 16 $\frac{2}{3}$ | 11 40 |
| 9 47 $\frac{2}{3}$ | 47 30 | 21 22 | 25 17 $\frac{1}{3}$ | 11 20 |

DIE 17 MAIJ.

| | | | |
|--------------------|-----------------------|--------|-------|
| 6 5 Declin. ♀ | 24 51 B. | | |
| 6 11 $\frac{1}{2}$ | Inter 37 47 | Alt. ☉ | 17 15 |
| 6 16 $\frac{3}{4}$ | ☉ 37 46 $\frac{3}{4}$ | | 16 35 |
| 6 23 $\frac{1}{6}$ | & 37 46 $\frac{1}{2}$ | | 16 0 |
| 6 27 $\frac{1}{6}$ | ♀ 37 46 $\frac{1}{4}$ | | 15 30 |
| 6 31 Declin. ♀ | repet. 25 51 | borea. | |

DIE 25 JULIJ.

| ☉ a Merid. | Decl. ♀ | Dist. ☉ & ♀ |
|------------|---------|---------------------|
| 40 30 | 0 20 | |
| 41 45 | | 45 27 |
| 43 25 | | 45 26 $\frac{2}{3}$ |
| 44 5 | | 45 27 |
| 44 40 | | 45 27 $\frac{1}{4}$ |

| | | | |
|----------------------|--------------------|---------------------|---------------------|
| 53 55 | | 45 27 $\frac{2}{3}$ | |
| 54 34 | | 45 28 | |
| 55 18 | | 45 28 $\frac{1}{6}$ | |
| 56 5 | | 45 28 $\frac{1}{6}$ | |
| 62 10 | 0 20 $\frac{1}{2}$ | | |
| 67 55 | | 45 27 $\frac{2}{3}$ | |
| 68 25 | | 45 28 | Alt. ☉ |
| 69 15 | | 45 28 $\frac{1}{2}$ | 25 30 $\frac{1}{2}$ |
| 70 26 | | 45 28 | 25 3 |
| 71 10 | | 45 28 | 24 35 |
| 72 0 | | 45 28 $\frac{1}{2}$ | 24 14 |
| Hora 6 $\frac{1}{3}$ | 0 24 B. | 45 26 | 8 25 |
| | | 45 26 | 8 0 |
| | 0 24 $\frac{1}{2}$ | | 7 55 |

Pro apparentia ♀ die 25 Julij vesperi¹.

| | | |
|-----------|--------------------|------------------------|
| H. 3 M. 0 | Diff. ♀ a centro ☉ | 45° 27 $\frac{1}{2}$ ' |
| | Declin. visa ☉ | 17 13 |
| | Declin. ♀ borea | |
| | (vti puto) | 0 20 |
| | Afc. R. visa ☉ | 134 29 40 |
| | Ang. diff. Afc. R. | 42 54 10 |
| | Ergo Afc. R. ♀ | 177 23 50 |
| | Resp. Longitudo | 27 28 $\frac{2}{3}$ mp |
| | Latitudo | 0 43 20 |

Alt. ♀ 32° Resp. Parallaxis 3' 40"

Resp. in Longit. 1' 30" subtr.

Latit. 3 20 subtr.

| | |
|-----------------------|------------------------|
| Ergo vera ♀ Longitudo | 27 27 $\frac{1}{6}$ mp |
| Latitudo | 0 40 M. |

DIE 17 OCTOBRIS MANE.

Cum ♀ eBet eleuata 18° 0' & distaret a meridie ad ortum 45 30, obseruabatur eius Declinatio per Armillas maiores subterraneas

vno 4 40 $\frac{1}{6}$ B.
altero 4 40

DIE 19 OCTOBRIS MANE².

| ☉ abortu | ♀ a ☉ | Decl. ♀ B. | Alt. ♀ | Alt. ☉ |
|----------|---------------------|--------------------|--------|--------|
| 25 0 | 31 23 | 4 18 $\frac{1}{2}$ | 23 13 | |
| 26 0 | 31 28 | 4 19 $\frac{1}{2}$ | 23 52 | 2 55 |
| 26 55 | 31 29 | | | 3 21 |
| 28 40 | 31 30 | 4 19 $\frac{1}{2}$ | | 3 56 |
| 30 20 | 31 30 $\frac{1}{2}$ | | | 4 43 |

DIE 26 OCTOBRIS A. M.

| Tempus | Diff. inter ♀ & ☉ | Declin. per Armill. | Alt. |
|--------|---------------------|------------------------------|-----------------------|
| 8 19 | 36 48 $\frac{3}{4}$ | | ☉ 4 35 |
| 8 23 | 36 49 | | 4 57 |
| 8 26 | 36 50 | | 5 31 |
| 8 29 | 36 50 $\frac{1}{2}$ | | 6 0 |
| 8 30 | | ♀ 3 36 $\frac{1}{4}$ | |
| 8 32 | | 3 36 | |
| 8 35 | 36 52 | | ♀ 28 55 $\frac{1}{2}$ |
| 8 37 | 36 52 | | 29 $\frac{1}{3}$ |
| 8 38 | | ☉ 15 41 | |
| 8 40 | 36 52 $\frac{1}{2}$ | 15 41 $\frac{1}{2}$ | 29 $\frac{5}{6}$ |
| 8 43 | 36 53 | | ☉ 7 10 |
| 8 44 | 36 53 $\frac{1}{4}$ | | 7 25 |
| | | | ♀ 30 $\frac{1}{12}$ |
| 8 47 | 36 53 $\frac{1}{4}$ | | ☉ 7 35 |
| | | | ♀ 30 $\frac{1}{6}$ |
| 8 50 | | ☉ 15 43 | ☉ 7 40 |
| 8 53 | | altero 15 42 $\frac{3}{4}$ | 7 50 |
| 8 56 | | ♀ 3 36 $\frac{5}{6}$ | ♀ 30 circiter |
| 8 57 | | alt. pin. 3 36 $\frac{2}{3}$ | |
| 8 58 | | Azim. ♀ 12 34 | ♀ 29 50 |
| 8 59 | | 11 49 | 29 54 |
| 9 0 | | 11 7 $\frac{1}{2}$ | 29 57 |

Azim. ♀ numerabatur a Meridie verlorum.

| | Diff. ☉ a ♀ | Alt. ☉ | Decl. ☉ | Alt. ♀ |
|------|---------------------|----------------------------|------------|------------------|
| 9 2 | 36 54 $\frac{1}{2}$ | 9 10 | | |
| 9 4 | 36 54 $\frac{1}{2}$ | 9 20 | 15 45 | |
| 9 7 | 36 55 | 9 30 | | 30 $\frac{1}{6}$ |
| 9 10 | 36 55 $\frac{1}{6}$ | 9 40 | 15 45 | |
| | | | Az. ♀ 8 30 | |
| 9 13 | | Decl. ♀ 3 36 $\frac{1}{3}$ | | |
| 9 15 | | altero 3 37 | | |

Horologium in antecedentibus obseruationibus iusto citius mouebatur 18 $\frac{1}{2}$ M. quæ veniunt demenda, rectificatione facta per Armillas. Sequentes obseruationes post correctum horologium.

| | ☉ a ♀ | Alt. ☉ | Decl. ☉ | Alt. ♀ |
|------|---------------------|--------|---------------------|---------------------|
| 9 31 | 36 55 $\frac{3}{4}$ | 11 40 | | 30 27 $\frac{1}{2}$ |
| 9 34 | 36 56 | 11 55 | | 30 30 |
| 9 36 | 36 56 | 12 10 | | |
| 9 37 | | 12 20 | 15 45 $\frac{2}{3}$ | |
| 9 38 | | | ♀ 3 37 | |

¹ E codice V.

² Cf. supra p. 252, inter obseruationes Solis.

9 39 *Transferat* ♀ *parum Mer.*, 30 30 $\frac{1}{4}$

| | | | | Azim. ☉ a mer. ad ort. |
|---------------------|---------------------|--------------------|--|------------------------------|
| 9 44 | 36 56 | 12 40 | 15 45 $\frac{1}{2}$ | 31 20 |
| 9 53 | 36 56 $\frac{1}{4}$ | 13 28 | 15 46 $\frac{1}{8}$ | 30 40 |
| 9 54 | 36 56 $\frac{1}{4}$ | 13 41 | 15 46 $\frac{1}{2}$ | 30 5 |
| 9 57 | 36 56 $\frac{1}{2}$ | 13 52 | 15 46 $\frac{1}{8}$ | 29 20 |
| 10 2 | 36 57 | 14 8 | 15 46 $\frac{3}{8}$ | 28 9 |
| 10 8 $\frac{1}{2}$ | 36 57 $\frac{3}{4}$ | 14 28 | 15 46 $\frac{3}{4}$ | 27 26 |
| 10 12 $\frac{1}{2}$ | 36 57 $\frac{3}{4}$ | 14 37 | 15 46 $\frac{3}{4}$ | 26 25 |
| 10 14 | 36 58 | 14 59 | 15 47 | 24 25 |
| 10 22 | 36 58 $\frac{1}{2}$ | 15 33 | 15 47 | 23 13 |
| 10 27 | 36 59 | 15 30 | 15 47 | 21 7 $\frac{1}{2}$ |
| 10 36 | 36 59 $\frac{1}{6}$ | 16 6 | 15 47 $\frac{1}{6}$ | 20 24 |
| 10 40 | 36 59 $\frac{1}{4}$ | 16 11 | 15 47 | 19 48 |
| 10 43 | 36 59 $\frac{2}{3}$ | 16 25 | 15 47 $\frac{1}{3}$ | 18 45 |
| 10 47 | 36 59 $\frac{2}{3}$ | 16 34 | 15 47 $\frac{1}{3}$ | 17 25 |
| 10 50 | 37 0 | 16 49 | 15 47 $\frac{1}{2}$ | 16 10 |
| 10 56 | 37 0 $\frac{1}{4}$ | 17 1 $\frac{1}{2}$ | 15 47 $\frac{2}{3}$ | |
| 11 0 | ☉ or. | 14 46 | Hinc potest horologium rectificari | |
| 11 2 $\frac{1}{2}$ | | 14 22 | | |
| 11 3 $\frac{1}{2}$ | | 14 7 | | |

| | Inter ♀ & ☉ | Alt. ♀ | Azim. ♀ verf. occ. | Decl. ♀ M. |
|---------------------|--------------------|---------------------|---|--------------------|
| 11 25 | | 26 43 | | 3 35 $\frac{1}{2}$ |
| 11 26 | | 26 39 $\frac{1}{4}$ | 30 8 $\frac{1}{2}$ alt. | 3 36 |
| 11 30 | 37 0 $\frac{3}{4}$ | | | |
| 11 34 | 37 1 | | | |
| 11 36 | 37 1 $\frac{1}{6}$ | | | |
| 11 37 | 37 1 | | | |
| pone | 37 1 | | | |
| 11 38 | | | vno 3 36 alt. 3 36 $\frac{1}{6}$ | |
| 11 39 | | 25 39 $\frac{3}{4}$ | 33 42 | |
| 11 44 | | 25 18 $\frac{1}{2}$ | 34 50 | |
| 11 46 | 37 1 $\frac{2}{3}$ | | | |
| 11 48 | 37 1 $\frac{3}{4}$ | | | |
| 11 50 | 37 1 $\frac{5}{6}$ | | | |
| 11 54 | | | vno 3 36 $\frac{1}{4}$ alt. 3 36 $\frac{1}{3}$ | |
| 11 55 | | | | |
| 11 54 $\frac{1}{2}$ | | 24 25 $\frac{1}{4}$ | 37 42 | |

0 58 post meridiem 3 35
12 42 $\frac{1}{2}$ ¹ fuit Meridies in Horologio
maiori quo hic antea vfi sumus,
erat autem correctum hora 9 $\frac{1}{2}$,
ergo interuallo 3 $\frac{1}{2}$ nimis cito mo-
uebatur minutis 42 $\frac{1}{2}$, quod cauend-
um est in omnibus obseruationi-
bus ab hora 9 $\frac{1}{2}$ vsque in vltimam.

DIE 27 OCTOBRIS

Postea sequenti die obseruabatur
♀ rursus mane a stellis in hunc qui
sequitur modum.

Horologium emendabatur hora 5 $\frac{1}{2}$.

| H. M. | Dist ♀ & cordis ☉ | Alt. ♀ | Decl. ♀ |
|--------------------|----------------------|--------|--------------------|
| 5 50 $\frac{1}{2}$ | ... | 15 10 | 3 33 |
| 5 52 | 42 24 $\frac{5}{6}$ | | |
| 5 55 $\frac{1}{2}$ | 42 24 | 15 46 | 3 32 $\frac{1}{2}$ |
| 5 58 | 42 24 $\frac{3}{4}$ | 16 3 | 3 33 |
| 6 1 | 42 24 $\frac{1}{2}$ | 16 20 | 3 33 $\frac{1}{2}$ |
| 6 4 $\frac{1}{2}$ | 42 24 $\frac{1}{2}$ | 16 40 | 3 34 |
| 6 8 $\frac{1}{2}$ | 42 24 $\frac{1}{2}$ | 17 8 | 3 33 $\frac{1}{2}$ |

Pro examinando Sextante obser-
uabatur inter cor ☉ & canem mino-
rem 37 20. Sed verior distantia canis
minoris & cordis ☉ est iuxta priores
obseruationes 37 19 $\frac{1}{2}$. Ergo Sextans
hic saltem $\frac{1}{2}$ scrupulo abundat, quod
caueri potest in omnibus obseruatio-
nibus antecedentibus a die priore
hucusque.

Sequentes distantiae sunt per alium
Sextantem qui prae-buit veram inter-
capedinem cordis ☉ & canis minoris
37 19 $\frac{3}{8}$.

| H. M. | ♀ & cor ☉ | Alt. ♀ | Decl. ♀ | Azim. ♀ a mer. verf. ort. |
|--------------------|---------------------|--------|--------------------|---------------------------------|
| 6 26 | | 18 58 | 3 34 | |
| 6 29 | 42 25 | 19 16 | 3 33 | |
| 6 32 | 42 25 | 19 33 | 3 34 | |
| 6 35 $\frac{1}{2}$ | 42 24 | 19 55 | 3 34 | |
| 6 37 $\frac{1}{2}$ | 42 24 $\frac{1}{4}$ | 20 8 | 3 34 $\frac{1}{2}$ | 48 35 |
| 6 40 | 42 25 | 20 22 | 3 34 $\frac{1}{2}$ | 48 10 |

Postea obseruabatur ♀ a ♄ in hunc
qui sequitur modum.

| H. M. | Dist. ♄ & ♀ | Decl. ♀ | Alt. ♀ | Azim. ♀ a mer. verf. ort. |
|--------------------|---------------------|--------------------|--------|---------------------------------|
| 6 59 $\frac{1}{2}$ | 23 27 | | 22 14 | 44 0 |
| 7 2 | 23 27 | 3 34 $\frac{1}{6}$ | 22 30 | 42 55 |
| 7 4 $\frac{1}{4}$ | 23 26 $\frac{3}{4}$ | 3 34 $\frac{1}{2}$ | 22 39 | 42 20 |
| 7 7 | 23 27 | 3 34 $\frac{1}{2}$ | 22 56 | 41 34 |
| 7 9 $\frac{3}{4}$ | 23 26 | 3 34 $\frac{1}{2}$ | 23 10 | 41 0 |
| dubia) | | | | |
| 7 13 $\frac{1}{2}$ | | | 23 32 | 40 4 |

¹ Sic in codice D.

Non videbatur amplius.

Sequentia in ♀ obseruabantur vt verificaretur horologium.

| | | |
|---------|--|-------|
| 7 16½ | Distabat ♀ a mer. versus ortum in Grad. æquinoctial. | 35 36 |
| 7 18 5" | Distabat ♀ a Mer. | 35 12 |
| 7 19 24 | | 34 55 |
| 7 20 48 | | 34 33 |

Hinc sequitur quod Horologium ab H. 5½ vsque in H. 7½ iusto citius mouebatur sesquialtero minuto, qui error corrigebatur subtrahendo vel retrahendo 1½ & in auferendo vnicum globulum de pondere.

DIE 2 NOUEMBRIS, MANE.

| | | |
|---------|-----------------------|--------|
| 6 36' | Dist. inter ♀ & cor ☉ | 44 14½ |
| | Alt. ♀ | 24 30 |
| 6 42 | Dist. eadem | 44 15 |
| 6 46 | Declin. ♀ | 3 43 |
| | Alt. ♀ | 25 10 |
| | Repetita Decl. | 3 42½ |
| 6 50 | 15" ♀ orient. | 30 10 |
| 6 51 30 | | 29 54 |
| 6 52½ | | 29 40 |

Hinc Horologium verificetur.

N. B. Huius diei obseruationibus non est fidendum, sunt enim incertæ, quia inter nubes densiores factæ sunt.

DIE 6 NOUEMBRIS.

Sequentia mane obseruabantur, & primum pro rectificatione horologii ad cor ☉.

| | | |
|----------|--------------------|--------|
| H. 6 57½ | Cor ☉ ultra Merid. | 1° 40' |
| 6 58½ | versus occasum | 1 55 |
| 6 59 | per æquat. | 2 0 |

Hinc colligitur horologium 31 M. ab hora 8½ celerius motum, quod in sequentibus correctum.

Sequitur obseruatio ♀.

| Tempora correctæ | Dist. ♀ & cord. ☉ | Decl. ♀ M. | Alt. ♀ | Azim ♀ |
|------------------|-------------------|------------|--------|--------|
| 6 33 | 47 37½ | 4 4 | 21 16 | |
| 6 36 | 47 37½ | 4 4½ | 21 32 | 43 55 |
| | alt. pin. } | | | |
| 6 38½ | 47 37½ | 4 4½ | 21 44 | 43 16 |
| 6 41½ | 47 37½ | | 22 3 | 42 35 |

Potes vti absque omni sensibili errore distantia 47 37½

Declin. Spicæ ☿ obseruabatur quæ erat prope ♀ pro emendanda declinatione ♀ ob refractionem 8 56

Horologium iusto citius mouebatur 31 minut. ab hesternâ emendatione H. 8½, quod venit a prioribus demendum.

Post verificatum Horologium.

| | Dist. ♀ a corde ☉ | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|-------|-------------------|---------|--------|---------|
| 6 44½ | 47 37½ | | | |
| 6 58 | 47 37½ | 4 5 | 23 25 | 38 42 |
| | vtroque } | | | |
| 7 1 | 47 37½ | | 23 44 | 37 55 |

Pone hic distantiam 47 37½

Nota bene. Hæ omnes obseruationes sunt satis bonæ & exquisitæ in his omnibus planetis & stellis, & horologium ab hora 8½ heri vespere, quando emendabatur ad fixas, vsque in horam quasi 7 matutinam iusto celerius mouebatur 31 minut., qui error post horam 6½ est correctus, in quinque igitur antecedentibus obseruationibus adhuc corrigendus venit¹.

Sequitur obseruatio ♀ & ☿ simul.

| | Inter ♀ & ☿ | Decl. ♀ M. | Alt. ♀ | Azim. ♀ a mer. ad ort. |
|-------|-------------|------------|--------|------------------------|
| 7 19 | 27 10 | 4 5 | 25 7 | 33 27 |
| 7 21½ | 27 10 | 4 5 | 25 18 | 32 50 |
| 7 25 | 27 10½ | 4 5½ | 25 34 | 32 0 |
| 7 28 | 27 10 | 4 5½ | 25 52 | 31 6 |

Postea obseruabatur ♀ a ♀ rursus paulo ante Solis ortum, cum dies esset & nullæ aliæ apparerent stellæ propter Lunam.

| | Dist. | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|-------|--------|---------|--------|---------|
| 7 43 | 27 10½ | 4 5½ | 26 44 | 27 25 |
| 7 46 | 27 10 | 4 6 | 26 56 | 26 35 |
| 7 50½ | 27 10½ | 4 6 | 27 2½ | 25 28 |

Azim. ♀ vbique numeratur a mer. versus ortum.

¹ Sic in codice. Sed supra 6h 33m Tycho adscripsit »Tempora correctæ«.

DIE 10 NOUEMBRIS.

Obferuabatur ♀ in hunc modum.

| Tempus | Inter ♀ & cor ☉ | Decl. ♀ | Alt. ♀ | Azim. ♀ a mer. verf. ort. |
|--------|---------------------|---------|--------|---------------------------------|
| 6 20 | 50 21 | 4 40 | 19 35 | 47 0 |
| 6 23 | 50 21 $\frac{1}{6}$ | 4 39 | 19 53 | 46 25 |
| 6 26 | 50 21 $\frac{1}{6}$ | 4 40 | 20 15 | 45 33 |

Postea rursus obferuabatur ♀ eodem modo.

| | | | | |
|------|---------------------|----------------------|---------------------|-------|
| 6 38 | 50 20 $\frac{1}{2}$ | 4 42 $\frac{1}{2}$ * | 21 41 $\frac{1}{2}$ | 41 50 |
|------|---------------------|----------------------|---------------------|-------|

* dubia, 4 39 melior.

Postea nubes subito totum cœlum e conspectu nostro abduxerunt, fuit tamen tempore præcedentium obseruationum satis serenum, vnde satis tuto potes te illis fundare: sunt etiam bonæ quæ in Marte acceptæ sunt.

Postea redeunte serenitate obseruauit ♀ hoc modo.

| Rectifi- catum Horolog. | Dist. ♀ & ☉ | Decl. ♀ | Alt. ♀ | Azim. ♀ a mer. verf. ort. |
|-------------------------------|---------------------|--------------------|--------|---------------------------------|
| 6 58 | 29 23 dubia | | | |
| 7 28 $\frac{1}{4}$ | 29 24 | 4 41 | | |
| 7 30 | 29 23 $\frac{3}{4}$ | 4 40 | | |
| 7 34 | 29 23 $\frac{3}{4}$ | 4 40 | 25 35 | 29 32 |
| 7 38 $\frac{1}{2}$ | 29 23 $\frac{1}{2}$ | 4 40 $\frac{1}{2}$ | 25 53 | 28 28 |
| 7 42 | 29 24 | 4 41 | 26 7 | 27 20 |
| 7 45 | 29 23 $\frac{3}{4}$ | 4 41 | 26 22 | 26 27 |
| 7 50 $\frac{1}{2}$ | 29 24 | 4 41 | 26 41 | 24 50 |
| 7 54 | 29 24 | 4 41 $\frac{1}{6}$ | 26 51 | 23 50 |

bona)

Nota. ♀ hoc mane tam lucida fuit, vt vmbram bene perceptibilem ederet instar fere Lunæ.

DIE 25 NOUEMBRIS.

♀ erat extra Meridianum.

| Tempus | Dist. ☉ & ♀ | Alt. ☉ | Decl. ♀ | Alt. ♀ |
|--------------------|---------------------|--------|-------------------|--------|
| 9 36 | | | 8 7 Mer. | |
| 9 47 $\frac{1}{4}$ | 46 24 | 7 18 | | |
| 9 51 | 46 25 | 7 30 | | 24 39 |
| 9 54 $\frac{1}{2}$ | 46 24 | 7 46 | | |
| 9 57 | 46 24 $\frac{1}{4}$ | | 8 7 $\frac{1}{2}$ | |
| 10 2 | 46 25 | 8 20 | | |
| 10 5 | 46 24 | 8 31 | | |
| 10 7 | 46 25 | 8 39 | 8 7 $\frac{1}{2}$ | |

¹ Adscriptum est: H. 7 57' 48" Spica per Merid.

| | | | | |
|---------------------|---------------------|------|---------|--------------------|
| 10 13 $\frac{1}{4}$ | 46 26 | 9 1 | Azim. ♀ | 23 19 |
| 10 17 $\frac{1}{2}$ | 46 26 $\frac{1}{4}$ | 9 20 | 25 25 | 23 4 $\frac{1}{2}$ |
| 10 21 | 46 26 | 9 33 | | |
| 10 22 $\frac{1}{2}$ | 46 25 | 9 41 | 27 14 | 22 39 |

Nota. Azim. ♀ numerabatur a Meridie versus occasum. Nam ♀ Meridianum iam diu antea pertransierat.

Posterioribus obseruationibus sunt factæ mutato fulcro instrumenti in Criptam propriam, antea enim fiebat obseruatio sub Divo vbi vento nonnihil agitante vacillabat instrumentum, vnde procul dubio ista varietas vnius Minuti in distantijs obseruatis eueniebat, posteriores itaque obseruationes limitabunt præcedentes.

| Tempus | Dist. ♀ & ☉ | Alt. ☉ | Azim. ♀ occ. | Alt. ♀ |
|---------------------|---|--|-----------------|--------------------|
| 10 27 | 46 24 $\frac{1}{2}$ | 9 58 | | |
| 10 28 $\frac{1}{2}$ | 46 25 $\frac{3}{8}$ | 10 1 | | |
| 10 29 | | | 29 37 | 22 4 $\frac{1}{4}$ |
| 10 31 | monstrabat horologium distantiam ☉ a merid. | | | 18 17 |
| 10 33 | 46 25 | 10 12 | | |
| 10 35 | 46 25 ☉ | tunc distabat a merid. | | |
| | | | | 16 40 |
| ... | ... | Alt. ☉ 10 15, | | |
| | | distabat a merid. | | 16 30 |
| 10 36 | 46 25 $\frac{1}{4}$ | Alt. ☉ 10 22, | | |
| | | Decl. ♀ 8 7 $\frac{3}{4}$, ☉ a merid. | | 15 45 |
| 10 40 | Alt. ♀ 21 4 $\frac{1}{4}$, Az. ♀ 33 0, | | | |
| | distabat ☉ a Merid. | | | 15 20 |

Potes absque omni sensibili errore vti distantia ♀ a ☉ part. 46 M. 25.

DIE 29 NOUEMBRIS, MANE.

| Spica a mer. | Tempus resp. | Dist. inter ♀ & Spicam | Decl. ♀ | Alt. ♀ |
|--------------------|-----------------|---------------------------|--------------------|---------------------|
| 14 15 | | 13 29 $\frac{1}{6}$ | | 21 $\frac{1}{2}$ |
| 12 37 ¹ | | 13 30 | | |
| 11 43 | 7 10' 56" | 13 31 | 9 13 | |
| 11 17 | 7 12 40 | 13 30 $\frac{1}{4}$ | 9 13 | |
| 10 30 | 7 15 48 | 13 29 $\frac{5}{6}$ | 9 12 $\frac{3}{4}$ | 22 1 |
| 8 11 | 7 25 4 | 13 30 $\frac{1}{8}$ * | 9 14 | 22 24 $\frac{1}{2}$ |

* Spica non satis conspiciebatur.

N. B. ♀ appropinquat ad maximam remotionem a ☉, non longe distans a termino remotissimo.

| | Inter ♀ & ☉ | Decl. ☉ | Alt. ☉ | Azim. or. |
|--------------------|---------------------|------------------------|-----------|-----------|
| 7 43 | 43 50 | 9 14 | 23 26 | |
| 7 48 | 43 50 | 9 14 $\frac{1}{3}$ | 23 34 | 16 50 |
| 7 50 $\frac{1}{2}$ | 43 50 $\frac{1}{4}$ | 9 14 $\frac{2}{3}$ | alt. pin. | |
| 7 53 $\frac{1}{4}$ | 43 50 $\frac{1}{6}$ | 9 14 $\frac{2}{3}$ | 23 47 | 15 30 |
| 7 55 $\frac{1}{2}$ | 43 50 | 9 14 $\frac{1}{2}$ | vno pin. | |
| 8 13 | 43 50 $\frac{2}{3}$ | 9 14 alt. | 24 19 | 10 40 |
| 8 17 | 43 51 | 9 15 | 24 31 | 9 30 |
| 8 21 $\frac{5}{6}$ | 43 51 $\frac{1}{2}$ | | 24 40 | 8 17 |
| 8 24 $\frac{1}{2}$ | 43 51 $\frac{1}{2}$ | | | |
| 8 27 $\frac{1}{2}$ | | 9 14 $\frac{5}{6}$ vno | | |
| | | 9 15 alt. pinn. | | |

Nota. Circa has vltimas obseruationes Jupiter admodum attenuatus apparebat, instante iam Solis ortu. Sol oriebatur hora 8 $\frac{1}{2}$ ἐν πλάτει propter nubes.

| | |
|--------------------|-----------------------------------|
| 8 14 $\frac{1}{6}$ | Diffabat ☉ a mer. verf. ort. 9 30 |
| 8 17 | Repetita diff. ☉ a merid. 8 49 |
| 8 21 $\frac{5}{6}$ | Repet. diff. ☉ a mer. |
| | in grad. æquat. 7 42 |

Hinc potest horologium rectificari, idque non saltem ad hæc tempora obseruationum ☉, sed etiam ea quæ prius in ☉ & ♀ atque Spica obseruabantur.

Locus autem ♀ tam ad ☉ quam ☉ applicandus debet ex posterioribus obseruationibus emendari, siquidem anteriores nimis remotæ sunt.

Postea exorto ☉ obseruabatur ☉ & ♀ in hunc qui sequitur modum, appropinquauit autem ♀ plurimum ad Meridianum.

| | |
|--------------------|---------------------------------|
| 8 53 $\frac{3}{4}$ | fuit tunc ♀ exquisitè in Merid. |
| | Alt. 24 52 $\frac{1}{4}$ |

| H. M. | Diff. ☉ & ☉ | Alt. ☉ |
|--------------------|----------------------------|--------|
| 8 56 $\frac{1}{2}$ | 46 34 dubia | 2 30 |
| 9 0 $\frac{1}{2}$ | 46 35 $\frac{1}{2}$ | 2 48 |
| 9 3 $\frac{3}{4}$ | 46 35 melior | 3 10 |
| 9 10 $\frac{3}{4}$ | 46 38 | 3 28 |
| 9 13 $\frac{5}{6}$ | 46 37 $\frac{1}{2}$ melior | 3 43 |
| 9 20 $\frac{3}{4}$ | 46 39 | 4 15 |
| 9 23 $\frac{2}{3}$ | 46 40 | 4 31 |

☉ circa has obseruationes erat iuxta Meridianum paululum eum prætergreßa, vnde altitudo & declinatio eius non variabat sensibilibiter ab ea, quæ iuxta Meridianum fiebat, potes itaque

vti vbique declinatione ☉ 9 14 meridionali.

| | Diff. ☉ & ☉ | Alt. ☉ | Azim. ☉ |
|--------------------|---------------------|--------|---------|
| 9 36 $\frac{1}{3}$ | 46 43 | 5 26 | |
| 9 39 | 46 42 $\frac{1}{6}$ | 5 38 | |
| 9 40 $\frac{1}{3}$ | 46 42 $\frac{1}{2}$ | 5 42 | 32 36 |
| 9 41 | 46 41 $\frac{1}{3}$ | 5 45 | |

Vltcrius non licuit obseruare propter nubes.

Nota. Hæ posteriores obseruationes sunt paulo exactiores antecedentibus; potes autem absque sensibili errore circa horam 9 M. 40 præsupponere ☉ a ☉ distantiam 46 42 in altitudine ☉ part. 5 M. 40. Animaduertendum vero, quod ☉ vbique Meridianum iam aliquantulum præterierat, quod circa Parallaxeos & refractionis impedimenta præcauenda ab altero situ antemeridiano discernendum venit.

DIE 5 DECEMBRIS.

Mane primo corrigebatur horologium ad cor ☉ Hora 5 M. 27 $\frac{1}{3}$, vt illud recte se haberet.

| H. M. | Diff. inter ☉ & Spicam | Decl. ☉ | Alt. ☉ | Azim. ☉ |
|--------------------|---------------------------|-------------------------|---|---------|
| 6 26 $\frac{1}{6}$ | 19 15 $\frac{1}{3}$ | 11 0 | etiam obseruatio fiebat inter recurrentes nubes | |
| 6 30 $\frac{3}{4}$ | 19 15 $\frac{1}{3}$ | 11 0 | etiam nubil. | |
| 6 36 $\frac{1}{6}$ | 19 15 $\frac{5}{6}$ | | 17 4 | 36 4 |
| 6 38 | 19 15 $\frac{1}{2}$ | 10 59 $\frac{1}{2}$ | 17 25 | |
| 6 40 $\frac{1}{2}$ | 19 15 $\frac{2}{3}$ | bonæ | | |
| 6 42 $\frac{2}{3}$ | 19 15 $\frac{1}{6}$ | 11 0 | 17 55 | |
| 6 47 $\frac{1}{2}$ | 19 16 $\frac{1}{2}$ | 11 0 $\frac{1}{3}$ | 18 9 | 33 27 |
| 6 52 $\frac{3}{4}$ | 19 17 10 59 $\frac{2}{3}$ | 18 29 | 32 40 | |
| | | alt. 11 0 $\frac{1}{6}$ | | |
| 6 54 $\frac{5}{6}$ | 19 17 $\frac{1}{6}$ | bona | | |
| 6 56 | 19 17 $\frac{1}{3}$ | bona | | |
| 7 3 | | | 19 13 | 29 7 |
| 7 5 $\frac{1}{4}$ | 19 17 $\frac{1}{3}$ | 11 0 | 19 24 | 28 55 |
| | | alt. 11 0 $\frac{1}{4}$ | | |
| 7 25 $\frac{1}{2}$ | 19 18 11 0 $\frac{1}{3}$ | 20 31 | 24 40 | |
| 7 27 | 19 18 $\frac{1}{2}$ | 11 0 $\frac{1}{2}$ alt. | | |
| 7 29 $\frac{2}{3}$ | 19 17 $\frac{2}{3}$ | | | |
| 7 34 | 19 18 $\frac{2}{3}$ | | 20 59 | 23 55 |
| 7 35 $\frac{1}{3}$ | 19 19 | | | |
| 7 44 $\frac{1}{2}$ | Videbatur Spicæ ☿ | | | 2 20 |
| 7 50 $\frac{1}{6}$ | transiuiße Merid. | | | 3 24 |

Hinc potest rectificari horologium.

Nota. Hæ omnes obseruationes in ♀ stella sunt admodum bonæ & opportunæ pro eius Apogæo & Eccentricitate inquirendis & vero ipsius motu restituendo; erat enim ♀ iuxta ipsum terminum maximæ remotiois a ☉ in situ matutino; potes autem potiſſimum fidere ſequentibus obseruationibus per ♄ ad ♀ factis, eo quod ♀ tunc eleuator eſſet & nullam ſenſibilem refractionem inſinuaret. Conſultum eſt nihilominus, vt vna adhibeantur antecedentes obseruationes a ♀ ad Spicam factæ. Locus autem ♄ certo conſtare poterit ex præmiſſis diſtantijs eius a corde ☉ & Spica ♄ vice-verſa habitis.

Poſtea obseruabatur ♄ a ♀ eo quod nullæ fixæ amplius ſatis apparuerint propter diluculum, poteſt autem ♄ locus huc applicari ſecundum eas obseruationes, quas paulo ante habuimus in diſtantijs eius a corde ☉ & Spica ♄ vtrinque ſumptas.

| Tempus | Inter ♄ & ♀ | Decl. ♀ | Alt. ♀ | Azim. ♀ a mer. verſ. ort. |
|--------------------|-----------------------|---------------------|---------------------|---------------------------|
| 7 57 $\frac{3}{4}$ | 49 23 $\frac{3}{4}$ | | 21 59 $\frac{1}{2}$ | 16 55 |
| 8 4 $\frac{1}{2}$ | 49 24 | | 22 13 | 14 40 |
| 8 6 $\frac{1}{3}$ | 49 24 $\frac{2}{3}$ | | | |
| 8 13 $\frac{1}{3}$ | 49 24 $\frac{1}{3}$ * | 10 59 $\frac{1}{2}$ | 22 29 | 12 56 |
| 8 19 $\frac{1}{6}$ | 49 25 dubia | | * melior | |

Potes hic vti diſtantia 49 24 $\frac{1}{3}$ & declin. 11 0 mer.

H. 9 16 $\frac{5}{6}$ cum diſtaret ♀ a merid. verſus occaſum, obseruata eſt eius altitudo 23 7, ſed hæc minus certa, vix enim conſpiciebatur.

Horologium in meridie iuſto citius mouebatur 8 $\frac{5}{6}$ M. ab hora 5 matutina, qua corripiebatur ad ſtellas.

DIE 6 DECEMBRIS, MANE.

Hora 5 $\frac{1}{3}$ rectificabatur Horologium.

Primo obseruabatur ♀ a lancibus libræ, præſertim a borealiori, quæ cum ſtella ♀ fuit quaſi ad æquilibrium Horizontis.

Nota. Erat hoc die magis continua ſerenitas quam heſterna, vnde ſequentes obseruationes ſunt tutiores.

| Tempus | Inter ♀ & Bor. lanc. | Alt. ♀ | Decl. ♀ | Azim. ♀ a mer. verſ. ort. |
|--------------------|----------------------|---------------------|----------------------------|---------------------------|
| 6 4 $\frac{1}{2}$ | 8 5 $\frac{1}{2}$ | 14 35 | | 42 10 |
| 6 8 | 8 5 | | 11 17 | |
| 6 14 $\frac{1}{3}$ | 8 4 $\frac{1}{2}$ | 15 28 | 11 17 | 40 29 |
| 6 18 $\frac{1}{2}$ | 8 4 $\frac{1}{2}$ | 16 19 | | 39 20 |
| 6 22 $\frac{5}{6}$ | 8 2 | | 11 17 $\frac{1}{3}$ | |
| | | | 11 17 $\frac{1}{2}$ alt. | |
| 6 28 $\frac{1}{2}$ | 8 1 | 16 42 | | 37 40 |
| 6 31 $\frac{5}{6}$ | 8 4 | | | |
| 6 34 $\frac{1}{6}$ | 8 3 $\frac{2}{3}$ | | 11 17 $\frac{1}{2}$ vtroq. | |
| 6 38 $\frac{1}{2}$ | 8 4 $\frac{1}{6}$ | 17 23 $\frac{1}{2}$ | | 34 10 |

Ego ipſemet obseruabam per radium diſt. inter ♀ & meridionaliorem lancem ☉, inuenique ſemel 2 $^{\circ}$ 52', reiterando 2 52. Suntque hæ duæ obseruationes ſatis bonæ quantum per radium obseruari poteſt, ſed faciunt potius ad latitudinem ♀ perueſtigandam, erant enim ambæ hæ ſtellæ quaſi in vno circulo verticali.

| | Inter ♀ & Spicam | Alt. ♀ | Decl. ♀ | Azim. ♀ |
|--------------------|---------------------|--------|---------------------|---------|
| 7 18 $\frac{5}{6}$ | 20 17 $\frac{1}{3}$ | 20 5 | | 24 6 |
| 7 22 $\frac{1}{6}$ | 20 18 $\frac{3}{4}$ | 20 32 | 11 18 | 24 55 |
| | dubia | | vtroque | |
| 7 28 $\frac{1}{6}$ | 20 17 $\frac{1}{2}$ | 20 35 | | 22 30 |
| 7 31 $\frac{3}{4}$ | 20 17 | 20 46 | 11 18 | 21 18 |
| 7 36 | 20 17 $\frac{2}{3}$ | | vtroque | |
| 7 39 $\frac{1}{3}$ | non erat bona. | | 11 17 $\frac{3}{4}$ | |

N. B. Omnes hæ obseruationes circa ♀ hoc die factæ ſunt admodum bonæ, pro ſitu eius verificando iuxta maximam remotioem a ☉ matutinam, & poſſunt conferri cum antecedenti die.

H. 7 36 $\frac{1}{2}$ Pro rectificando horologio obseruabatur ſpica ♄ cum iam proxime tranſierat Merid., eratque tunc in Azimutho occ. 2 $^{\circ}$ 10', Alt. 25 0.

7 39 $\frac{5}{6}$ Fuit diſt. æquat. ſpicæ a Merid. verſus occ. 2 49, atque ex his duobus poteſt verificari horologium, quod erat correctum ad cor ☉ circa horam 5 $\frac{1}{3}$.

Sequuntur nunc obseruationes inter ♄ & ♀ propter diluculum quod non patiebatur alias ſtellas videri.

| Tempus | Dist. ♀ & ☉ | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|---|---------------------|--------------------------|--------------------------|---------|
| 7 50 | 50 22 | | | |
| 7 54 | 50 22 | | 21 42 | 14 58 |
| | | | | incerta |
| 7 59 $\frac{1}{6}$ | 50 22 $\frac{3}{8}$ | | 21 52 | 13 35 |
| | | | | dubia |
| 8 3 $\frac{1}{2}$ | 50 23 | 11 19 | 22 0 | 13 32 |
| | | 11 19 $\frac{1}{2}$ alt. | | |
| 8 8 | 50 23 | | 22 10 | 12 45 |
| 8 13 $\frac{1}{2}$ | 50 22 | | 22 18 | 9 56 |
| 8 19 $\frac{1}{3}$ | 50 21 $\frac{5}{8}$ | 11 19 $\frac{1}{2}$ | 22 24 | 8 28 |
| | | 11 20 alt. | | |
| 8 22 $\frac{3}{4}$ | 50 21 $\frac{5}{8}$ | | 22 30 | 7 29 |
| 8 24 $\frac{1}{2}$ | | 11 20 | | |
| | | 11 19 $\frac{3}{4}$ | | |
| 8 26 $\frac{1}{2}$ | 50 21 $\frac{3}{4}$ | | 22 33 | 6 50 |
| Potes circa horam 8 $\frac{1}{4}$ vti distantia ♀ | | | | |
| & ☉ 50 22 $\frac{1}{2}$, & declin. ♀ | | | | |
| absque omni sensibili errore. | | | | |
| 8 30 $\frac{1}{3}$ | Repetita declinatio | | 11 19 $\frac{3}{4}$ | |
| | | | alt. 11 19 $\frac{5}{6}$ | |

Hæ declinationes ♀ sunt meliores.

8 51 $\frac{5}{6}$ Tranſiuit ♀ per merid. habens alt. 22 45 $\frac{1}{3}$ idque per Quadrantem Volub.

Altitudo æquatoris 34 5 10

Altit. Merid. ♀ 22 45 20

Declin. ♀ 11 19 50

Quod ſatis conuenit cum declinationibus ♀ vltimo per Armillam maiorem acceptis, vnde dubium non eſt talem fuiſſe declinationem ♀ circa id tempus, cum meridianum pertranſiuit. Reliquæ differentiæ quæ a prima ♀ matutina obſervatione¹.

Nota. Cum hæ obſervationes fierent in ♀ ad Solem, iam tranſierat ♀ aliquantulum Meridianum.

| Tempus | Inter ♀ & ☉ | Alt. ☉ | Azim. ☉ a mer. ad ort. | Limitatio distantia- rum ☉ & ♀ |
|--------------------|---------------------|--------|------------------------------|--------------------------------------|
| 9 15 | 46 48 $\frac{1}{2}$ | 3 10 | | |
| 9 18 | 46 48 $\frac{2}{3}$ | 3 22 | | 46 49 |
| 9 20 $\frac{1}{6}$ | 46 50 | 3 33 | | 46 50 |
| 9 23 $\frac{1}{3}$ | 46 52 | 3 56 | | 46 51 |
| 9 26 | 46 51 | 4 5 | | 46 52 |
| | melior | | | |
| 9 28 $\frac{1}{2}$ | 46 52 $\frac{1}{2}$ | 4 21 | | 46 52 $\frac{1}{2}$ |

¹ Sic in codice D.

| | | | | |
|--------------------|---------------------|------|-------|---------------------|
| 9 41 $\frac{5}{6}$ | 46 53 $\frac{1}{2}$ | 5 21 | 32 7 | 46 53 $\frac{1}{2}$ |
| 9 45 $\frac{1}{2}$ | 46 53 $\frac{1}{2}$ | 5 32 | 31 24 | 46 54 |
| 9 56 | 46 57* | 6 18 | 29 5 | 46 55 |
| 9 58 | 46 58* | 6 26 | 28 40 | 46 56 |
| 10 34 | 46 58 $\frac{1}{2}$ | 8 30 | | 46 57 $\frac{3}{4}$ |
| 10 36 | 46 58 $\frac{1}{2}$ | 8 37 | | 46 58 |
| 10 57 | 46 57* | 9 30 | 15 27 | |
| * dubia † melior | | | | |

Nota. Horologium in Meridie mox ſequente ſaltem 4 ſcrupulis primis iuſto celerius mouebatur, qui error illi ab hora 5 $\frac{1}{3}$ matutina, qua corrigebatur, imputandus venit, atque hinc rectificari poſſunt antecedentia tempora.

Pone circa horam 9 25 in altitudine 4 partium diſt. ♀ & ☉ 46 52
& H. 10. 35 in alt. 8 $\frac{1}{2}$ part. 46 58

DIE 7 DECEMBRIS.

Horologium emendabatur hora 5 $\frac{1}{2}$.

| H. M. | Diſt. ♀ a bor. lanc. ☉ | Decl. ♀ | Alt. ♀ | Azim. |
|--------------------|---------------------------|--------------------------|--------|-------|
| 5 47 $\frac{1}{2}$ | 7 21 $\frac{1}{2}$ | | 12 40 | 45 44 |
| 5 53 $\frac{5}{6}$ | 7 20 bis | | 13 17 | 44 12 |
| 5 57 $\frac{3}{4}$ | 7 20 $\frac{1}{4}$ bona | | 13 36 | 43 15 |
| 6 0 $\frac{4}{5}$ | 7 20 | 11 35 | 13 54 | 42 45 |
| | Diſt. ♀ a mer. lanc. ☉ | 11 34 $\frac{1}{2}$ alt. | | |
| 6 7 $\frac{3}{4}$ | 2 41 $\frac{1}{4}$ | 11 35 altero | | |
| 6 11 | 2 41 $\frac{1}{8}$ | | 14 50 | 40 25 |
| 6 13 $\frac{3}{4}$ | 2 41 $\frac{1}{6}$ | | | |
| 6 16 $\frac{1}{3}$ | 2 41 $\frac{1}{4}$ | 11 35 | 15 27 | 39 17 |
| vtroque, fere | | | | |

Nota. Per radium accepi eandem diſtantiam 2° 40' proxime.

Nota. Hæ obſervationes ♀ etſi fuerunt non longe ſupra Horizontem factæ, tamen quia fuerunt in conſimili quaſi ſitu ſupra Horizontem omnes hæ tres ſtellæ, ideoque refractionem vno & eodem modo inſinuabant, quare ipſæ quoque diſtantiæ recte ſe habebunt. Erant autem boreales lances libræ cum ♀ quaſi in æquilibrio Horizontis, niſi quod ſtella illa libræ erat paulo eleuatior, altera vero pro lati-

tudine ♀ saltem opportuna est, nam linea recta ducta ab hac stella meridionali in lance cadebat satis præcise versus stellulas iuxta Polum Zodiaci sitas, quantum solo intuitu animaduvertere licuit, erat autem ♀ hac stella meridionali lance borealior, sed altera erat ♀^{re} & borealior aliquantulum & etiam orientalis.

Nota. Ex his non solum locus ♀ verificari potest, sed etiam parallaxis peruestigari, collatione videlicet facta harum observationum cum ijs quæ fiebant in ♀ iuxta Meridianum, vel potius ultra, tam hesternæ die quam hodiernæ, omnibus inuicem bene collatis & trutinatis.

Sequuntur observationes ♀ a Spica.

| Tempus | Dist. ♀ & Spicæ | Declin. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------|---|---------------------------------------|--------|---------|
| 7 7 $\frac{1}{2}$ | 21 15 $\frac{5}{8}$ | 11 36 vno 11 35 $\frac{1}{4}$ alt. | | |
| 7 13 | 21 15 $\frac{5}{8}$ pone 21 15 $\frac{1}{2}$ | | 19 30 | |
| | Dist. inter ♀ & ☿ | | | |
| 7 20 | 51 18 $\frac{5}{8}$ | 11 36 | 20 0 | |
| 7 23 | 51 17 $\frac{3}{4}$ | | | |
| 7 28 $\frac{1}{2}$ | 51 19 $\frac{5}{8}$ | | 20 32 | 20 15 |
| 7 33 | 51 19 | 11 37 | | |
| alt. Sext. | 51 19 $\frac{1}{2}$ | 11 36 $\frac{1}{4}$ alt. | | |
| 7 36 $\frac{3}{4}$ | 51 20 | | | |
| 7 42 | 51 19 $\frac{5}{8}$ | | 20 59 | |

Hæc aliquantula varietas in distantia ☿ & ♀ propterea contigit, quod rarissimæ nubes interciderint in ijs locis, vbi stellæ hæ videbantur, potes nihilominus absque sensibili errore vti distantia part. 51 Min. 19 $\frac{1}{2}$, antecedentes autem observationes hoc die factæ bene se habent, quia tunc erat ap-
prime serenum.

DIE 14 DECEMBRIS.

| | |
|----------------------|--------------------------------|
| H. 8 30' | Transiit ♀ per Merid., habens |
| alt. per Q. Volub. | 20 21 |
| per Q. Chalyb. | 20 21 $\frac{1}{3}$ |
| Declin. per Armillas | 13 46 $\frac{1}{4}$ A. |
| | alt. pinn. 13 45 $\frac{1}{2}$ |

DIE 15 DECEMBRIS A. M.

| | Dist. ♀ a Spica III | Declin ♀ mer. | Alt. ♀ | Azim. ♀ a mer. verf. ort. |
|--------------------|--------------------------|--|---------------------|---------------------------------|
| 6 41 $\frac{3}{4}$ | 29 30 | | | |
| 6 44 $\frac{1}{3}$ | 29 29 $\frac{5}{8}$ | 14 1 14 1 $\frac{1}{2}$ alt. | | |
| 6 46 $\frac{5}{8}$ | | 14 0 $\frac{1}{3}$ 15 $\frac{1}{2}$ 14 0 $\frac{1}{4}$ alt. | | |
| 6 54 $\frac{1}{2}$ | 29 29 $\frac{3}{4}$ | | 16 15 $\frac{1}{2}$ | 28 0 |
| 6 57 | 29 30 | 14 0 $\frac{1}{2}$ alt. 14 0 $\frac{1}{4}$ | 16 26 | 27 26 |
| | Inter ♀ & fin. gen. Oph. | | | |
| 7 1 $\frac{1}{2}$ | 18 10 | 14 0 $\frac{3}{4}$ alt. 14 0 $\frac{1}{2}$ | 16 36 | 26 23 |
| 7 3 $\frac{1}{2}$ | 18 9 $\frac{3}{4}$ | 14 1 $\frac{1}{3}$ | 16 55 | 25 50 |
| 7 6 $\frac{1}{2}$ | 18 10 | 14 0 $\frac{1}{4}$ alt. 17 0 | | 25 23 |

Nota. Stellula hæc, a qua ♀ obseruabatur, distabat a borealiori lance $\underline{\Omega}$ 19 31

Eadem repetita distantia 19 32
Declin. huius stellæ erat mer. 9 36

Fuit autem ♀ vna cum hac stellula quasi in eadem altitudine, ideoque ad æquilibrium Horizontis & per consequens refractio illarum distantiam non variabat, etiam si paululum decliuiores erant. Constat itaque ex distantia a borealiori lance $\underline{\Omega}$ & declinatione eius revera fuisse stellulam in sinistro genu Ophiuchi, ita vt de ea nullum restet dubium.

| Tempus | Dist. ♀ & Spicæ | Declin. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------|---------------------|---|--------------------|---------|
| 7 16 | 29 31 $\frac{1}{2}$ | | 17 34 | 22 36 |
| 7 19 $\frac{3}{4}$ | 29 30 | 14 1 $\frac{1}{2}$ 17 40 $\frac{1}{2}$ 14 1 $\frac{1}{4}$ alt. | | 21 48 |
| 7 22 $\frac{1}{2}$ | 29 30 $\frac{1}{4}$ | 14 1 $\frac{1}{2}$ 17 56 14 1 $\frac{1}{4}$ alt. | | 21 3 |
| 7 24 $\frac{3}{4}$ | 29 30 $\frac{1}{2}$ | | 18 2 $\frac{1}{2}$ | 20 29 |
| 7 27 $\frac{1}{2}$ | | 14 1 $\frac{2}{3}$ 18 9 14 2 alt. | | 19 50 |
| 7 29 | 29 32 | | 18 14 | 19 25 |
| 7 31 $\frac{1}{2}$ | 29 32 $\frac{1}{2}$ | 14 1 $\frac{2}{3}$ 18 22 14 2 | | 18 40 |
| 7 34 $\frac{1}{2}$ | 29 33 | | 18 29 | 18 2 |
| 7 36 $\frac{1}{3}$ | 29 32 $\frac{1}{2}$ | | 18 33 | 17 30 |
| 7 38 $\frac{3}{4}$ | 29 33 | 14 2 18 40 14 1 $\frac{3}{4}$ alt. | | 16 57 |
| 7 41 $\frac{1}{3}$ | 29 33 $\frac{1}{2}$ | | 18 47 | 16 14 |
| 7 44 $\frac{1}{2}$ | 29 34 | 14 2 18 54 | | 15 25 |

Nota. Hæc aliquantula diuersitas in distantia ♀ a Spica contigit partim, quia ♀ motu proprio reuera a Spica ♀ longius disceßit, partim ob refractionem successe imminutam per maiorem altitudinem, partim etiam quia diluculum circa tempora præsertim vltima, ita iam attenuarat conspectum Spicæ ♀ vt vix difficulter foret obseruabilis, potes autem ponere circa Horam 7½ distantiam ♀ & Spicæ 29 32 absque sensibili errore, & Hora 7¾ 29 32½. Circa vltimum vero tempus Hora 7¾ pone 29 33 vel ad summum 29 33½ & insensibiliter aberrabis. Potes autem vti potius tunc 29 33½, quia refraction minor reddita ♀ motum in tantum adauxit.

H. 8 43½ Transiuit ♀ per Merid. habens

Alt. per Volub. 20 1¾

per Chalyb. 20 3

N. B. Die præcedenti cum transiuit ♀ Merid. habuit Alt. 20 21, mutauit itaque declinationem interea in 24 horis quasi 19½ Minut. Declin. ♀ fuit circa hoc tempus 14 4.

| Tempus | Dist. ☉ a ♀ | Alt. ☉ | Azim. ☉ | Decl. ♀ |
|--------|-----------------|--------|---------|---------|
| 9 5½ | 46 35½ | 3 0 | 38 40 | |
| 9 9½ | 46 37 | 3 24 | 37 40 | |
| 9 12½ | 46 36½ | 3 31 | 37 10 | |
| 9 14½ | melior) | | | 14 3½ |
| 9 17½ | 46 36 | 3 52 | 36 1 | |
| 9 22 | 46 37 | 4 19 | 34 59 | |
| 9 26 | 46 37) | 4 37 | 34 11 | |
| | bona) | | | |
| 9 32¾ | 46 36¾ | 5 6 | 32 36 | |
| 9 37¾ | 46 36¾ | 5 21 | 31 33 | 14 3¾ |
| 9 43¾ | 46 38 | 5 57 | 30 10 | |
| 9 51½ | 46 36¾ | 6 26 | 28 32 | |
| 10 0 | 46 38½ | 7 0 | 26 34 | |
| 10 4¾ | 46 38 | 7 18 | 25 38 | |
| | bona, ☉ clarus) | | | |
| 10 8 | 46 37½ | 7 30 | 24 46 | |
| 10 10¾ | 46 37½) | 7 42 | 24 10 | 14 4 |
| | melior) | | | |
| 10 22¾ | 46 37½ | dubia | | |
| 10 27¾ | 46 38½) | 8 31 | 20 30 | 14 3¾ |
| | melior) | | | |
| 10 36 | 46 38¾ | 8 55 | 18 25 | |
| 10 43¾ | 46 38½ | 9 14 | 16 43 | |
| 10 55¾ | 46 38½ | 9 43 | 13 53 | |

Nota. Circa Horam 10¾ oportebat ♀ esse quasi 16 proxime graduum in altitudine.

Horologium in Meridie mouebatur iusto tardius circa 7 Minuta, qui error illi acceßit ab Hora 5½ huius diej antemeridiana, qua horologium rectificabatur.

N. B. Limitatio antecedentium obseruationum alias per se satis accommodatarum.

| H. M. | In alt. ☉ | Pone dist. ♀ a ☉ |
|-------|-----------|------------------------------|
| 9 5 | 3 0 | 46 35 vel 35½ prout conuenit |

| | | |
|------|-----|-------|
| 9 18 | 4 0 | 46 36 |
|------|-----|-------|

| | | |
|------|-----|-------|
| 9 30 | 5 0 | 46 37 |
|------|-----|-------|

| | | |
|------|-----|-------|
| 10 0 | 7 0 | 46 38 |
|------|-----|-------|

| | | |
|-------|------|--------|
| 10 30 | 8 30 | 46 38½ |
|-------|------|--------|

| | | |
|------|------|--------|
| 11 0 | 9 45 | 46 38¾ |
|------|------|--------|

Atque secundum hæc fiat limitatio intermediarum temporum & Altitud. si opus fuerit.

Potes nihilominus adhibere limitationem antecedentem & considerare illa vna si omnia non iuste succedunt, tempora autem hic assignata non sunt verificata ex obseruatione mane ad stellas & transitu per Meridianum, igitur corrigenda.

Cætera circa Solis declinationem & ♀ potes adhibere prout obseruatio dedit assumendo circa vltima tempora ♀^{ris} declinationem p. 14 M. 4 præcise.

Quod hic non in tantum mutantur differentiæ distantiarum sicut alias, fit potissimum quia Sol erat adeo decliuis in ipso etiam Meridie & ♀ erat non admodum alta versus alteram partem a Meridiano inclinans ad occasum, quare hic diligenter attendendum in collatione. Nam Venus tendens versus occasum se plus per refractionem attollit, ideoque minus a Sole recedere per hanc videtur quam alias. Hæc igitur diligenter limitanda, nisi similis detur positus & in ♀ & Sole ab altera parte. Vide quid sequatur ex his per se præsertim vltimis circa horam 10½.

Calculus loci ♀ ex obseruatione diei
15 Decembris¹.

H. 7 M. 0 A. M. Dist. ♀ a sinistro
genu Ophiuchi 18° 10'
Declin. ♀ 14 1 M.
Declin. genu Oph. 9 37 M.
Ang. diff. Ascens. 18 1 subt.
Asc. R. genu Oph. 243 39
Ergo Asc. R. ♀ 225 38
H. 7² Afc. R. ♀ a Spica 225 38⁵
cum ponatur Asc. R.
Spicæ 195 54¹
(vide primum Tomum Progym-
nasm. pag. 175)

Itaque H. 7¹ ponatur Asc. R. ♀
225° 38' 25"
Declinatio 14 1 30 M.
Resp. Longitudo 17 12¹ M
Latitudo 3 8 B.
in altit. 18° quasi.

DIE 16 DECEMBRIS, MANE.

H. 6¹ verificabatur Horologium.

| Tempus | Inter ♀ & Spicam | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------------------|---------------------------------|--------------------------------------|--------|---------|
| 6 50 | | 14 18 | 15 46 | |
| | | 14 18 ¹ ₃ | alt. | |
| 6 57 ¹ ₂ | 30 33 ¹ ₃ | | 16 15 | 27 5 |
| 7 0 | 30 34 | | 16 21 | 26 25 |
| 7 3 ¹ ₃ | 30 34 ¹ ₃ | | 16 43 | 25 37 |
| 7 8 | 30 35 | 14 19 | 16 55 | 24 26 |
| | | 14 20 alt. | | |
| 7 13 ¹ ₂ | 30 34 ⁵ ₆ | 14 19 ¹ ₂ | 17 22 | 22 58 |
| | | 14 19 alt. | | |
| 7 21 ² ₃ | 30 36 | 14 19 | 17 40 | 20 59 |
| | | 14 18 ² ₃ alt. | | |
| 7 28 ¹ ₆ | 30 36 ¹ ₄ | | 18 2 | 19 15 |
| 7 34 ⁵ ₆ | 30 36 ¹ ₂ | | 18 22 | 17 32 |
| 7 41 ² ₃ | 30 36 ⁵ ₆ | 14 19 | 18 31 | 16 3 |
| | | vtroque | | |
| 7 43 ¹ ₂ | 30 36 ⁵ ₆ | | | |
| 7 49 ² ₃ | 30 37 | | 18 45 | 13 55 |
| 7 56 ¹ ₂ | | 14 19 ¹ ₂ | 19 4 | 12 0 |

Dist. ♀ a Spica per alterum Sext. vet.
7 34⁵₆ 30 36 dubia
7 41²₃ 30 35¹₂ dubia
7 43¹₂ 30 36¹₂ melior
7 49²₃ 30 37 bona
7 56¹₂ 30 37¹₂ hæc vltima dubia prop-
ter auroram

Potes vti ad Horam 7 Min. 50 distan-
tia 30 37 exacte & declinatione 14 19¹₂.
Circa Horam 8 fuit declin. ♀ 14 19⁵₆
alt. pinn. 14 19¹₄

DIE 18 DECEMBRIS, MANE.

| Tempus | Inter ♀ & Spicam | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------------------|---------------------------------|---------|--------------------------------------|---------|
| 6 52 ¹ ₂ | 32 42 ¹ ₂ | 15 18 | | 28 15 |
| 6 56 ¹ ₂ | 32 44 | 15 33 | 14 53 ¹ ₂ | 27 20 |
| | | | alt. 14 53 ¹ ₃ | |
| 7 2 ¹ ₃ | 32 44 ¹ ₆ | 15 57 | 14 53 ⁵ ₆ | 25 48 |
| | | | alt. 14 53 ² ₃ | |
| 7 9 ¹ ₃ | 32 44 | 16 21 | 14 53 ¹ ₂ | 24 7 |
| | | | alt. 14 53 ² ₄ | |

DIE 22 DECEMBRIS, ANTE MERID.

| Tempus | Dist. ♀ & ☉ | Decl. ♀ | Alt. ☉ | Azim. ☉ |
|--------------------------------|--------------------------------|--------------------------------|--------|---------|
| 9 16 | | 15 59 | | |
| 9 27 | 46 8 | | 5 10 | |
| 9 30 | 46 8 | | 5 22 | 33 20 |
| 9 34 | 46 8 ² ₃ | | 5 36 | 32 35 |
| 9 37 ² ₃ | 46 8 | | 5 50 | 31 53 |
| 9 40 ¹ ₂ | 46 9 ¹ ₂ | | 6 2 | 31 8 |
| 9 43 ¹ ₆ | 46 8 ² ₃ | 16 1 | 6 12 | 30 45 |
| 9 50 ¹ ₂ | 46 8 ⁵ ₆ | | 6 40 | 29 11 |
| 9 54 ¹ ₆ | 46 8 ⁵ ₆ | | 6 55 | 28 20 |
| 9 58 | 46 8 ¹ ₃ | 16 0 ¹ ₂ | 7 8 | 27 37 |
| 10 7 ¹ ₂ | | | 7 42 | 25 35 |

Horologium in Meridie 4⁵₆ M. iusto
citius mouebatur, fuit autem Hora 9
antemerid. mediocriter correctum ad
Solem.

DIE 26 DECEMBRIS.

Horologium emendabatur ad Spi-
cam ♀ Hora 7¹₄.

| Tempus | Inter ♀ & Spicam | Decl. ♀ | Alt. ♀ | Azim. ♀ |
|--------------------------------|---------------------------------|-------------------------------------|--------|---------|
| 7 ¹ ₄ | | 17 6A. | | |
| 7 16 | 41 28 | 17 6 | 14 23 | 23 10 |
| 7 19 | 41 27 ¹ ₂ | 17 6 | 14 30 | 22 23 |
| 7 22 ¹ ₂ | 41 28 | 17 6 | 14 41 | 21 27 |
| | | 17 6 ¹ ₂ | | |
| 7 26 | 41 27 ¹ ₂ | | 14 50 | |
| 7 28 | 41 28 | | 14 57 | 20 12 |
| 7 30 ¹ ₂ | 41 28 | | 15 2 | 19 35 |
| 7 32 ¹ ₃ | 41 27 ⁵ ₆ | | | |
| 7 35 ² ₃ | 41 28 | 17 7 | 15 20 | 18 26 |
| | | alt. 17 6 ² ₃ | | |

¹ E codice V.

| | | | | |
|--------------------|---------------------|--------------------|-------|-------|
| 7 39 | 41 28 $\frac{1}{2}$ | 17 7 | 15 35 | 17 42 |
| | | 17 6 $\frac{3}{4}$ | | |
| 7 44 | 41 28 $\frac{1}{2}$ | 17 7 $\frac{1}{2}$ | 15 47 | 16 25 |
| | | vtroq.) | | |
| 7 48 $\frac{3}{8}$ | 41 29 | 17 7 | 15 52 | 15 16 |

Circa vltimas obseruationes diluculum obseruationibus nonnihil impedimento fuit.

| | Inter ♀ & ☉ | Alt. ☉ | Azim. ☉ or. |
|--------------------|---------------------|--------|-------------|
| 8 42 | 45 41 $\frac{1}{4}$ | 0 56 | 45 24 |
| 8 44 $\frac{1}{3}$ | 45 41 | 1 4 | 45 0 |
| 8 46 | 45 40 $\frac{5}{8}$ | 1 15 | 44 40 |
| 8 48 | 45 40 $\frac{5}{8}$ | 1 22 | 44 15 |
| 8 49 $\frac{3}{8}$ | 45 41 | 1 33 | 43 55 |

♀ appropinquauit Meridiano sed erat adhuc ante Merid.

8 52 $\frac{1}{2}$ Tranfuit ♀ per Meridianum habens Alt. per Q. Chalyb. 16 58
per Q. Volub. 16 57

| | | | |
|--------------------|---------------------|------|-------|
| 8 53 $\frac{5}{8}$ | 45 42 | 1 54 | 43 3 |
| 8 55 | 45 42 $\frac{1}{2}$ | 2 0 | 42 53 |
| 8 56 $\frac{1}{8}$ | 45 43 $\frac{1}{8}$ | 2 6 | 42 36 |
| 8 57 $\frac{2}{3}$ | 45 43 $\frac{1}{3}$ | 2 16 | 42 15 |
| 8 59 $\frac{1}{2}$ | 45 43 $\frac{1}{2}$ | 2 22 | 42 2 |
| 9 1 $\frac{1}{3}$ | 45 43 $\frac{1}{2}$ | 2 33 | 41 38 |
| 9 3 | 45 43 $\frac{3}{4}$ | 2 44 | 41 12 |
| 9 4 $\frac{1}{2}$ | 45 43 $\frac{3}{4}$ | 2 51 | 40 55 |
| | 45 44 | 3 0 | |

☉ fuit satis clarus & purus ab ipso ortu hucusque, postea in rariufculas nubes videbatur incidere, potes itaque satis tuto vti his obseruationibus ☉ etiam non multum supra Horizontem eleuati, conferendo videlicet alias vespertinas, in confirmili Solis decliuitate, ♀^{re} etiam prope Merid. in confirmili a ☉ distantia tunc versante.

DIE 27 DECEMBRIS A. M.

| Tempus | Inter ♀ & Spicam | Decl. ♀ M. | Alt. ♀ | Azim. ♀ or. |
|--------------------|---------------------|---------------------|--------|-------------|
| 7 21 | | | 14 17 | |
| 7 25 | 42 33 | | 14 26 | |
| 7 28 | 42 33 $\frac{1}{2}$ | 17 22 $\frac{1}{2}$ | | |
| | melior) | | | |
| 7 31 $\frac{1}{3}$ | 42 33 | 17 22 $\frac{1}{2}$ | 14 43 | |
| 7 35 | 42 34 | | 14 53 | |

¹ Adscriptum est (40).

² Adscriptum est (41).

³ Adscriptum est (42).

| | | | |
|--------------------|---------------------|---------------------|-------------|
| 7 38 | 42 34 $\frac{1}{2}$ | 17 22 $\frac{1}{2}$ | 15 1 |
| 7 42 | 42 34 $\frac{3}{8}$ | 17 22 $\frac{1}{2}$ | 15 11 17 24 |
| 7 45 $\frac{1}{2}$ | 42 35 | 17 22 $\frac{1}{2}$ | 15 19 16 40 |
| 7 47 $\frac{3}{4}$ | 42 35 | 17 22 $\frac{1}{2}$ | 15 23 16 15 |
| | bona | 17 22 $\frac{5}{6}$ | |

8 58 Tranfuit ♀ per Merid. habens
Alt. per Chalyb. 16 41 40
per Sext. 16 42 0
per Volub. 16 43 dubia
Declin. ♀ Merid. 17 23 vno pin.
17 23 $\frac{1}{2}$ alt.

| | Inter ☉ & ♀ | Alt. ☉ | Azim. ☉ |
|--------------------|----------------------------------|--------------------|---------|
| 9 12 $\frac{1}{2}$ | 45 41 ¹ | 3 5 | |
| 9 14 | 45 42 | | |
| 9 15 $\frac{1}{2}$ | 45 41 ² | 3 17 $\frac{1}{4}$ | 40 0 |
| 9 17 | 45 41 $\frac{3}{4}$ | 3 26 | 39 41 |
| 9 19 $\frac{1}{4}$ | 45 42 $\frac{1}{2}$ | 3 36 | 39 17 |
| 9 23 | 45 42 | | |
| 9 27 $\frac{1}{2}$ | 45 41 $\frac{1}{2}$ ³ | 4 19 | |

DIE 28 DECEMBRIS, MANE.

Horologium corrigebatur H. 7 $\frac{1}{2}$ a Spica ♄.

| Tempus | Inter ♀ & Spicam | Decl. ♀ M. | Alt. ♀ | Azim. or. |
|--------------------|---------------------|---------------------|--------|-----------|
| 7 24 $\frac{1}{2}$ | 43 39 $\frac{1}{2}$ | 17 36 $\frac{1}{2}$ | 14 29 | 19 50 |
| | | 17 37 alt. | | |
| 7 27 | 43 39 $\frac{2}{3}$ | | | |
| 7 30 $\frac{1}{2}$ | 43 39 $\frac{3}{4}$ | | 14 46 | |
| 7 33 | 43 39 dubia | | 14 53 | |
| 7 36 | 43 40 $\frac{1}{2}$ | 17 36 $\frac{3}{4}$ | 15 0 | 17 0 |

| | Inter ♀ & ☉ | Alt. ☉ | Azim. ☉ |
|--------------------|---------------------|--------|---------|
| 8 43 $\frac{1}{2}$ | 45 32 $\frac{2}{3}$ | 1 34 | 44 35 |
| 8 46 $\frac{1}{2}$ | 45 31 $\frac{1}{2}$ | 1 49 | 43 56 |
| 8 49 | 45 32 $\frac{1}{4}$ | 2 3 | 43 30 |
| 8 52 | 45 33 | 2 16 | 42 53 |

Postea tranfuit ♀ Merid., sed obseruari non potuit.

| | | | |
|------|---------------------|------|-------|
| 9 5 | 45 36 $\frac{1}{2}$ | 3 25 | 40 8 |
| 9 8 | 45 35 $\frac{1}{4}$ | 3 42 | 39 30 |
| 9 13 | non poterat | 4 4 | 38 25 |

Nota. Hæ obseruationes ♀ a Sole vix sunt tam exactæ, eo quod Iohannes aurifaber non aderat, qui acumine visus in obseruando ♀ præpollet.

OBSERVATIONES MERCURIJ.

DIE 4 APRILIS.

Vesperī conspiciēbatur ☿ & obseruabatur in hunc modum.

| Dext. hum. | Per Sext. | Alt. | Decl. |
|-------------|-------------------|------|--------|
| Or. ab ortu | inter ☿ & ocul. ☿ | ☿ | ☿ |
| 155 30 | 22 59½ | 3 0 | |
| 156 50 | 22 58½ | 2½ | 17 34 |
| 157 22 | 22 57 | 2 10 | 17 34½ |

Inter ☿ & ♀

160 I 10 45
II 10 44 1 G.

Paulo post, inter ☿ & ♄ 4 40 ἐν πλάτει.

Color ☿ dum primum conspiciēbatur subpallidus erat, postea rubicundus, apparuit fere duplo maior ♄^{no}.

DIE 11 APRILIS.

Per Quadrantem Minimum.

| Canis min. ab ortu | Tempus | Inter ☿ & oc. ☿ | Alt. ☿ | Decl. ☿ |
|--------------------|---------|-----------------|--------|-------------|
| | | | ☿ | Bor. |
| 141 58 | 8 48 14 | 14 27¼ | 5 20 | |
| 142 26 | 8 50 6 | 14 28 | 5 10 | |
| 142 49 | 8 51 38 | 14 29 | 4 50 | |
| 143 15 | 8 53 22 | 14 29½ | 4 40 | |
| 143 26 | 8 54 6 | | | dubia 20 59 |

Plures habere non licuit propter nubes.

| Tempus H. M. S. | Ex propria obseruatione ¹ | | | |
|--------------------------|--------------------------------------|-----------------------------------|-----------|------------|
| | Longitudo | | Latitudo | |
| 8 48 14 | 20 | 13½♂ | 2 | 47½B. |
| Ex Pruten. Mæstlini | | Ex Alphon. Cypriani | | |
| Long. | Lat. | Long. | Lat. | |
| 21°21'♂ | 2°6'B. | 21°5'♂ | 1°45'B. | |
| Canis min. ab ortu | Tempus | Inter ♂ & luc. ped. Ericht. | Alt. ♀ | Decl. ♀ |
| 146 0 | 9 4 22 | 24 39¾ | 3 20 | 21 5 |
| 147 9 | 9 8 56 | 24 41¼ | 2 40 | 21 4½ |
| 148 10 | 9 13 2 | 24 41¾ | 2 20 | |

DIE 16 APRILIS.

| Cor ☿ ab ortu | Tempus | Dist. a luc. pede II | Alt. ☿ | Decl. ☿ |
|--------------------|--------|----------------------|--------|---------|
| 115 4 | 9 9 | | 4 | 20 14½ |
| 116 14 | 9 14 | 37 38 | 3½ | |
| 117 0 | 9 17 | 37 41 | 3¼ | |
| Luc. hydræ ab ortu | | | | |
| 126½ | | 37 40 | 3 | |
| 128 0 | 9 22 | 37 41 | 2½ | |

Puto antecedentem obseruationem fuisse in stella ☿, potest fieri periculum e præcedentium dierum obseruationibus & Ephemeridibus.

OBSERVATIONES STELLARUM FIXARUM IN ZODIACO².

ET PRIMO QUIDEM EARUM QUÆ SUNT IN ARIETE.

DIE 9 JANUARIJ.

Lucidæ √ Altit. Merid. 55 34½
Declin. eiusdem per Armillas 21 29
alt. pin. 21 28½

DIE 10 JANUARIJ P. M.

Alt. Merid. Lucidæ √ 55 34½
Declin. eius per Armillas 21 28½
altero pinnac. 21 28½

DIE 12 JANUARIJ.

Altit. lucidæ √ Merid. 55 34½
Declin. per Armill. lucidæ √ 21 27¾
alt. pin. 21 28
Eadem repetita vno 21 28½
alt. 21 28¼
Eadem repetita 21 28½
21 28½

DIE 15 JANUARIJ.

Alt. lucidæ √ per Muralem 55 34½
per Volub. 55 34

¹ In codice V. adscriptum est: »Repetatur computatio« (Kepleri manu, vt videtur).

² E codice V. Omnes defunt in codice Haunienfi (D.).

Decl. per Armill. maiores,
vtrōq. 21 28 $\frac{3}{4}$

Hæc bene conuenit cum Volubili
vel altitudine vtraque intermedia.

DIE 14 DECEMBRIS.

Inter lucidam \vee & oculum γ 35 32 $\frac{1}{2}$ ter

DIE 15 DECEMBRIS, VESPERI.

Alt. Merid. 2 \vee per Chalyb. 52 51 $\frac{3}{4}$
per Volub. 52 51 $\frac{3}{4}$

Alt. Merid. lucid. \vee
per Chalyb. 55 34 $\frac{3}{4}$
per Volub. 55 35

DIE 19 DECEMBRIS.

Alt. Mer. luc. \vee per Chalyb. 55 35 fere
per Volub. 55 35 $\frac{1}{2}$
Longitudo 1° 54' γ , Latitudo 9° 57' 5".

OBSERUATIONES STELLARUM IN TAURO.

DIE 24 JANUARIJ.

Boreale cornu γ per Volub. 62 15 $\frac{1}{2}$
per Chalyb. 62 16

DIE 30 JANUARIJ.

Declin. Aldeboræ vno 15 36
per Arm. maiores alt. 15 36 $\frac{1}{4}$
Repetita declinatio vno 15 36
alt. 15 36 $\frac{1}{4}$

Oculus γ per Merid., Alt. 49 41 $\frac{2}{3}$
per Volub. 49 41 $\frac{3}{4}$
Boreale cornu γ per Volub. 62 15 $\frac{1}{3}$
per Chalyb. 62 15 $\frac{1}{2}$

DIE 4 FEBRUARIJ.

Oculi γ Alt. Merid.
per Volub. 49 41 $\frac{5}{6}$
per Chalyb. 49 41 $\frac{5}{6}$
per Muralem, nouo 49 42
veteri 49 42 $\frac{1}{3}$
Declin. eius per Armill. vno 15 36 $\frac{1}{4}$
altero 15 36 $\frac{1}{2}$

DIE 5 FEBRUARIJ.

Alt. oculi γ in Merid., præcife 49 42
vtrōque
Oculus γ per Mer.,
per Chalyb. 49 41 $\frac{3}{4}$
per Volub. 49 41 $\frac{3}{4}$
Boreale cornu γ 62 16

DIE 6 FEBRUARIJ.

Oculi γ Alt. Merid. 49 42 $\frac{1}{2}$
per Volub. 49 41 $\frac{5}{6}$

DIE 7 FEBRUARIJ.

Oculi γ Alt. Merid. vtrōque 49 42
per Chalyb. 49 42
Boreale cornu γ fere 62 15 $\frac{1}{2}$

DIE 8 FEBRUARIJ.

Oculus γ per Chalyb. 49 42

DIE 10 FEBRUARIJ.

Oculus γ in Merid., Alt.
per Volub. 49 41 $\frac{3}{4}$
per Chalyb. 49 42
Declin. eiusdem per Arm.,
vno 15 37
alt. 15 37 $\frac{1}{2}$
Repetita vtrōque 15 37

DIE 11 FEBRUARIJ.

Declin. oculi γ vno 15 37
altero 15 37 $\frac{1}{2}$

DIE 12 FEBRUARIJ.

Australe cornu γ per Volub. 54 53 $\frac{1}{2}$
per Chalyb. 54 54 $\frac{1}{2}$

DIE 21 DECEMBRIS, VESPERI.

Alt. Mer. Aldeboræ
per Chalyb. 49 42 $\frac{1}{2}$
per Volub. 49 41 $\frac{1}{2}$
Longitudo 4° 1 $\frac{1}{2}$ II, Latitudo 5° 30 $\frac{1}{2}$ M.

Oculi γ Asc. Recta Anno 1588 m. Martio & Aprili¹.

| | |
|------------|------------|
| 63° 5' 27" | 63° 6' 36" |
| 63 3 4 | 63 5 27 |
| 63 5 38 | 63 5 7 |
| 63 4 43 | 63 5 9 |
| 63 4 56 | |

¹In folio soluto in cod. Vindob. lat. 10709. Observationes supra inter observationes Veneris reperiuntur.

Ex priori fixarum restitutione ad hoc
tempus eſſet eiſdem Aſc. R. $63^{\circ} 51'$. Ex
lib. com. $63^{\circ} 5' 44$.

OBSERVATIONES STELLARUM IN GEMINIS.

DIE 5 FEBRUARIJ.

| | |
|-----------------|---------------------|
| Plantæ pedis II | 56 43 $\frac{1}{2}$ |
| | 56 43 $\frac{2}{3}$ |

DIE 14 FEBRUARIJ.

| | |
|-----------------------------|---------------------|
| Superius caput II in Merid. | |
| per Volub. | 66 46 $\frac{5}{6}$ |
| per Chalyb. | 66 47 $\frac{1}{6}$ |
| Inferius caput II in Merid. | |
| per Volub. | 63 1 $\frac{2}{3}$ |
| per Chalyb. | 63 2 |
| Decl. per Armill., vno | 28 57 $\frac{1}{4}$ |
| altero | 28 57 $\frac{1}{3}$ |

DIE 15 FEBRUARIJ.

| | |
|--------------------------|---------------------|
| Super. caput II in Mer. | |
| per Volub. | 66 47 |
| per Chal. | 66 47 $\frac{1}{4}$ |
| Infer. caput II | |
| per Volub. | 63 1 $\frac{2}{3}$ |
| per Chal. | 63 1 $\frac{3}{4}$ |
| Declin. eius B., vtroque | 28 57 |

DIE 19 FEBRUARIJ.

| | |
|-----------------------------|---------------------|
| Plantæ pedis II Alt. Merid. | |
| per Volub. | 56 37 |
| per Chalyb. | 56 37 $\frac{1}{3}$ |
| Calx pedis II | |
| per Volub. | 56 43 |
| per Chalyb. | 56 43 $\frac{1}{2}$ |
| Lucida pedis II | 50 45 $\frac{1}{4}$ |
| Superius caput II | |
| per Volub. | 66 47 |
| per Chalyb. | 66 47 |
| Inferius caput II | |
| per Volub. | 63 1 $\frac{2}{3}$ |
| per Chalyb. | 63 1 $\frac{3}{4}$ |
| Declin. vno | 28 57 $\frac{1}{3}$ |
| altero | 28 57 $\frac{1}{2}$ |
| Repetita declin. vno | 28 57 $\frac{1}{6}$ |
| altero | 28 57 $\frac{1}{3}$ |

DIE 25 FEBRUARIJ.

| | |
|----------------------------|---------------------|
| Alt. super. capitis II | |
| per Vol. | 66 47 |
| per Chalyb. | 66 47 $\frac{1}{4}$ |
| per Tychon. | 66 47 $\frac{2}{3}$ |
| Inferius caput II | |
| per Volub. | 63 1 $\frac{3}{4}$ |
| per Chalyb. | 63 2 $\frac{1}{4}$ |
| per Tychon. | 63 2 |
| Declin. per Arm. mai., vno | 28 57 $\frac{1}{4}$ |
| alt. | 28 57 $\frac{1}{2}$ |
| Repetita | 28 57 $\frac{1}{2}$ |
| alt. | 28 57 |

Ergo vera declinatio 28 57 $\frac{1}{4}$, quod
hoc loco ſatis concordat cum obser-
uatione per Chalybeum.

DIE 27 FEBRUARIJ.

| | |
|-------------------|---------------------|
| Lucida pedum II | |
| per Chalyb. | 50 45 $\frac{2}{3}$ |
| per Volub. | 50 45 $\frac{2}{3}$ |
| Superius caput II | |
| per Chalyb. | 66 47 $\frac{1}{4}$ |
| per Volub. | 66 46 $\frac{1}{4}$ |
| Inferius caput II | |
| per Chalyb. | 63 2 $\frac{1}{4}$ |
| per Volub. | 63 1 $\frac{5}{6}$ |
| per Tychon. | 63 1 $\frac{5}{6}$ |
| Declin. vno | 28 57 |
| alt. | 28 57 $\frac{1}{2}$ |

DIE 28 FEBRUARIJ.

| | |
|-----------------------------|---------------------|
| Superius caput II per Tych. | 66 47 $\frac{1}{2}$ |
| Inferius caput II | 63 1 $\frac{5}{6}$ |

DIE 15 DECEMBRIS, VESPERI.

| | |
|--|---------------------|
| Decl. superioris capitis II | 32 43 |
| | 32 43 $\frac{1}{2}$ |
| Long. inf. cap. II $17^{\circ} 31\frac{1}{2}' 69$, Lat. $6^{\circ} 38' B$. | |

OBSERVATIONES STELLARUM IN LEONE.

DIE 25 FEBRUARIJ.

| | |
|------------------------------|--------------------|
| Cordis Ω in Mer. Alt. | |
| per Chal. | 48 2 $\frac{1}{2}$ |
| per Volub. | 48 2 $\frac{1}{4}$ |
| per Mural. | 48 2 $\frac{1}{4}$ |

| | | |
|-------------------------------|--------|---------------------|
| Decl. eius per Armill., vno | 13 | 57 $\frac{1}{2}$ |
| | altero | 13 57 $\frac{3}{4}$ |
| Alt. lucidæ ceruicis Ω | | |
| per Chal. | 55 | 59 |
| per Volub. | 55 | 58 $\frac{5}{8}$ |
| Decl. eiusdem per Arm., vno | 21 | 54 |
| | altero | 21 54 $\frac{1}{8}$ |

DIE 27 FEBRUARIJ.

| | | |
|--------------------------|----|------------------|
| Cor Ω per Chalyb. | 48 | 2 $\frac{1}{2}$ |
| per Volub. | 48 | 2 $\frac{1}{2}$ |
| per Mural. | 48 | 2 $\frac{1}{8}$ |
| | 48 | 2 $\frac{2}{8}$ |
| Decl. per Armillas | 13 | 57 $\frac{1}{2}$ |
| | 13 | 57 $\frac{1}{8}$ |

quod fatis conuenit¹.Longit. cordis Ω 24° 6' Ω , Lat. 0° 27 $\frac{1}{2}$ B.OBSERUATIONES STELLARUM
IN VIRGINE.

DIE 20 FEBRUARIJ, MANE.

| | | |
|--------------------------------|------|--------------------|
| Spicæ \mathfrak{M} Alt. Mer. | | |
| per Chal. | 25 | 8 0 |
| per Volub. | 25 | 7 55 |
| per Mural., vtroq. pinn. | 25 | 7 30 |
| Decl. per Armill. | vno | 8 57 |
| | alt. | 8 57 $\frac{1}{4}$ |
| Repetita decl. | vno | 8 57 |
| | alt. | 8 56 $\frac{5}{8}$ |

DIE 18 DECEMBRIS, MANE.

| | | |
|----------------------------------|--------------|---------|
| Alt. Spicæ \mathfrak{M} merid. | | |
| per Chalyb. | 25 | 8 25 |
| per Volub. | 25 | 7 40 |
| per Mural. | 25 | 7 55 |
| | vet., melior | 25 8 25 |

DIE 27 DECEMBRIS, MANE.

| | | |
|--------------------------------|------|--------------------|
| Spicæ \mathfrak{M} Alt. mer. | | |
| per Mural. | 25 | 8 $\frac{1}{4}$ |
| per Chalyb. | 25 | 8 $\frac{1}{2}$ |
| per Sext., incerta | 25 | 7 |
| Decl. Spicæ per Arm., vno | 8 | 57 $\frac{3}{4}$ |
| | alt. | 8 57 $\frac{1}{2}$ |
| Decl. Spicæ repet., vno | 8 | 57 |
| | alt. | 8 57 $\frac{1}{2}$ |

OBSERUATIONES STELLARUM
IN LIBRA.

DIE 10 JANUARIJ, MANE.

| | |
|-------------------------------------|---------------------|
| Australis lancis Ω Alt. Mer. | |
| per Volub. | 19 51 $\frac{1}{4}$ |

OBSERUATIONES STELLARUM
IN AQUARIO.

DIE 25 NOUEMBRIS, VESPERI.

| | |
|---|-----------------------|
| Declin. vltimæ trium inferiorum in dextra manu \approx | 2 12 $\frac{1}{4}$ M. |
|---|-----------------------|

DIE 19 DECEMBRIS, VESPERI.

| | |
|---------------------------|---------------------|
| Inter os Pegasi & dextrum | 11 31 $\frac{1}{2}$ |
| humerum \approx | 11 32 |

DIE 28 DECEMBRIS, VESPERI.

| | |
|---|-------------------------------------|
| Inter dextr. humerum \approx et Os Pegasi | |
| | 11 31 $\frac{1}{2}$ bis, vtere hac. |
| | 11 32 |

OBSERUATIONES STELLARUM
IN PISCIBUS.

DIE 6 DECEMBRIS, VESPERI.

| | |
|---|----------------------------|
| Dist. inter caput & caudam piscis me- ridionalis | 11 9 $\frac{1}{2}$ medioc. |
| Declin. capitis piscium | 1 3 |
| Repetita | 1 3 $\frac{1}{8}$ |
| | 1 3 |
| Declin. caudæ piscium | . . . ² |

DIE 28 DECEMBRIS.

| | |
|--|-------------------------|
| Inter caudam australis piscis | 34 52 $\frac{3}{4}$ |
| & lucidam \vee | 34 52 $\frac{3}{4}$ |
| | 34 53 |
| Inter lucidam in nexu lino- rum χ & oculum γ | 40 12 $\frac{3}{4}$ bis |
| Inter infimam in lino bore- ali χ & oculum γ | 42 8 bis |
| Inter mediam ac lucidiorem ex tribus superioribus in Bor. lino χ & ocul. γ | 44 14 $\frac{1}{8}$ |

¹ Observationes distantiarum cordis Ω a Polluce, a Spica, a cauda Ω die 18 Aprilis factæ supra p. 280 inter observationes Veneris insertæ sunt.

² Deest in codice.

| | |
|---------------------------------|--------------------|
| Inter quartam in austr. lino) (| |
| a cauda ad nodum nu- | |
| merando & ocul. ♂ | 52 35 |
| | 52 35 ¹ |
| Inter præcedentem duarum | |
| apud australem spinam | 53 43 ⁵ |
| borealis) (& sinistrum | 53 43 ³ |
| brachium Andromedæ | 53 44 ¹ |
| & ocul. ♂ | |
| Declin. eius Bor. | 22 2 |
| Inter sequentem duarum ista- | |
| rum apud Australem spi- | |
| nam) (Bor. & sin. cubi- | |
| tum Andromedæ | 51 31 ¹ |
| & ocul. ♂ | 51 31 ³ |
| Declin. eius | 21 11 |
| Inter ocul. ♂ & præcedentem | |
| trium in australi spina | 49 42 ¹ |
| borealis) (| 49 42 ² |

| | |
|-------------------------------|-----------------------|
| Inter ocul. ♂ & sequentem in | |
| australi spina borealis) (| 48 23 bis |
| Inter ocul. ♂ & australiorem | |
| in aluo) (bor. | 47 44 bis |
| Inter ocul. ♂ & borealiorem | 46 30 |
| in aluo borealis) (| 46 30 ¹ |
| Declin. Borealis duarum in | |
| aluo) (borealis | 25 5 ¹ B. |
| Australioris duarum in | |
| aluo) (eiusdem | 22 24 B. |
| Præcedentis in australi | |
| spina) (| 19 16 ¹ B. |
| Sequentis in spina eiusdem) (| 18 51 B. |
| Lucidæ in nexu linorum | 0 45 B. |
| Inferioris in lino boreali | 7 4 B. |
| Lucidioris ex supremis | |
| in boreali lino | 13 13 ¹ B. |

OBSERVATIONES STELLARUM IN ASTERISMIS BOREALIBUS EXTRA ZODIACUM.

DIE 9 JANUARIJ.

| | |
|-----------------------------|-------------------------|
| Extremæ caudæ vrfæ maio- | |
| ris Alt. minima | 17 20 ¹ |
| Primæ caudæ vrfæ maioris | |
| Decl. per Armill., vno pin. | 58 15 ¹ |
| altero | 58 15 ¹ |
| Media caudæ vrfæ maioris | 57 9 ⁵ |
| | 57 10 ¹ |
| Tertia caudæ vrfæ maioris, | |
| infra Polum vtroque pin. | 51 27 ³ |
| Lucidæ in □ vrfæ min. Alt. | |
| min. per Volub. | 41 45 ¹ |
| Declin. eiusdem | vno 75 52 |
| per Armill. | alt. 75 52 ⁵ |
| Sequentis in vrfæ minore | |
| Alt. min. per Volub. | 39 13 ¹ |
| Declin. eiusdem | vno 73 22 ¹ |
| per Armillas | alt. 73 21 ¹ |

DIE 10 JANUARIJ, MANE.

| | |
|--------------------------|---------------------------|
| Primæ caudæ vrfæ maioris | |
| Declin. | vno 58 12 |
| | altero 58 12 ¹ |

| | |
|--------------------------------|--------------------|
| Mediæ caudæ vrf. mai. Decl. | 57 6 ¹ |
| | 57 6 |
| Extremæ caudæ vrfæ maioris | |
| Declin. supra Polum | 51 23 ¹ |
| | 51 23 ³ |
| Arcturi Altit. Merid. | 55 28 ¹ |
| Declin. per Arm. vtroq. pin. | 21 22 ¹ |
| Declin. supra Polum lucidioris | |
| in vrfæ maiore | 75 50 |
| Infra polum | 75 52 |
| Ergo verior Declin. | 75 51 |

Declinationum Examinatio per Stellas in cauda vrfæ maioris.

| | |
|-------------------------|----------|
| Prima caudæ infra polum | 58 15 20 |
| supra polum | 58 12 15 |
| Differentia | 3 5 |
| Media caudæ | |
| infra | 57 10 0 |
| supra | 57 6 7 |
| Differentia | 3 53 |

¹ 5 in 4³/₄ correx. cod. V.

| | |
|----------------------------------|---------------------|
| Vltima caudæ | |
| infra | 51 27 45 |
| supra | 51 23 45 |
| Differentia | 4 0 |
| Lucidæ in \square vrfæ minoris | |
| Alt. max. | 70 4 $\frac{3}{4}$ |
| Lucidæ Perfei Alt. min. | |
| per Volub. | 14 16 |
| Decl. per Arm. infra | 48 24 |
| Polum alt. pin. | 48 23 $\frac{1}{2}$ |
| Declin. borealis duarum pri- | |
| marum in rotis vrfæ ma- | |
| ioris versus occasum, vno | 63 56 45 |
| Altera auftraliior | 58 34 |
| alt. pin. | 58 33 $\frac{1}{4}$ |

EODEM DIE 10 JANUARIJ P. M.

| | |
|----------------------------------|---------------------|
| Primæ in cauda vrfæ maior. decl. | |
| per Armillas vno | 58 16 $\frac{1}{2}$ |
| altero | 58 16 $\frac{1}{4}$ |
| Media in cauda | vno 57 9 |
| altero | 57 8 $\frac{3}{4}$ |
| Extremæ caudæ vrfæ maior. | |
| Alt. Merid. per Quad. | 17 20 $\frac{2}{3}$ |
| Declin. eiusdem per Armill. | |
| vtroque pin. | 51 28 |
| Lucidioris in \square vrfæ | vno 75 51 |
| maioris declin. infra | |
| Polum alt. | 75 51 $\frac{1}{4}$ |
| Repet. extrema in vrfæ mai. | 51 28 |
| in sua declin. infra polum | 51 27 $\frac{5}{6}$ |
| Minoris in vrfæ min. | vno 73 20 |
| decl. infra Polum alt. | 73 19 $\frac{3}{4}$ |
| Lucidioris in vrfæ minore | |
| Alt. min. per Q. Volub. | 41 45 $\frac{1}{6}$ |
| Decl. eiusdem per Armill. | 75 51 |
| alt. | 75 51 $\frac{1}{5}$ |
| Declin. Borealis duarum | |
| primarum in rotis vrfæ | 63 57 |
| maioris versus ortum | 63 57 $\frac{1}{4}$ |
| Declin. alterius | vno 58 34 |
| altero | 58 34 |
| Declin. alterius minus lucidæ | |
| in vrfæ minore, vnico tan- | |
| tum pinn. propter nubes | 73 19 $\frac{3}{4}$ |
| Quartæ in cauda Draconis | |
| Alt. min. per Q. Volub. | 32 18 |

DIE 12 JANUARIJ.

| | |
|----------------------------------|---------------------|
| Declin. extremæ in vrfæ maiore | |
| infra Polum in minima Alt. | |
| per Armill. maiores | 51 27 $\frac{1}{2}$ |
| alt. pinn. | 51 27 $\frac{1}{3}$ |
| Lucidæ in vrfæ minore | 75 51 $\frac{1}{4}$ |
| Alterius minus lucidæ | |
| infra polum declinatio | 73 19 $\frac{2}{3}$ |
| alt. pin. | 73 19 $\frac{1}{2}$ |
| Repetita declin. luc. vrf. min. | 75 51 $\frac{1}{3}$ |
| Repet. declin. alterius minus | |
| lucidæ vrfæ min. | 73 19 $\frac{1}{2}$ |
| Alt. min. luc. per Q. Volub. | 41 45 $\frac{1}{4}$ |
| Alt. min. alterius in vrfæ min. | 39 13 $\frac{1}{3}$ |
| Declin. lucidioris in \square | |
| vrfæ minoris | 75 51 $\frac{1}{3}$ |
| altero | 75 52 |
| Decl. alterius min. luc., | |
| vtroq. | 73 19 $\frac{1}{2}$ |
| Cum eßent paulo vltra Meridianum | |
| infra Polum. | |
| Lucidioris vrfæ min. declin. | 75 51 $\frac{1}{4}$ |
| alt. | 75 51 $\frac{1}{2}$ |
| Alterius minus lucidæ | 73 19 $\frac{1}{2}$ |
| Præcedentis duarum primarum | |
| in rotis vrfæ mai. | vno 63 57 |
| declin. versus ortum alt. | 63 57 $\frac{1}{6}$ |
| Inferioris duarum in Rotis | 58 34 |
| vrfæ maioris | 58 34 $\frac{1}{3}$ |

DIE 15 JANUARIJ, MANE.

| | |
|---------------------------------|-------------------------|
| Declin. min. in \square vrfæ | vno 73 19 $\frac{1}{2}$ |
| min. supra Polum alt. | 73 19 |
| Altera magis lucida | vno 75 50 $\frac{1}{4}$ |
| supra Polum alt. | 75 50 $\frac{1}{2}$ |
| Habuit eadem Alt. | |
| merid. max. | 70 4 $\frac{2}{3}$ |
| Repetitæ minoris in | 73 18 $\frac{3}{4}$ |
| vrfæ min., dubiæ | 73 19 |
| propter auroram | 73 18 $\frac{1}{2}$ |
| alt. | 73 19 $\frac{1}{4}$ |
| Luc. in latere Perfei Alt. min. | 14 16 bis |
| Declin. infra Polum, | vno 48 23 |
| altero | 48 23 $\frac{1}{4}$ |
| Repetita Lucidioris in vrfæ | 75 50 $\frac{1}{3}$ |
| min., circa auroram | 75 50 $\frac{1}{4}$ |
| Lucida anterior. in \square | 63 57 45 |
| vrfæ mai. | 63 57 45 |
| ambæ versus occasum. | |

| | |
|--|---------------------|
| Sequens in \square vrfæ | 58 35 $\frac{1}{4}$ |
| maioris | 58 34 $\frac{3}{4}$ |
| Lucidior duarum in vrfæ | |
| min., vtroque | 75 52 |
| Altera minus lucida in \square | 73 20 $\frac{1}{4}$ |
| vrfa min., declin. | 73 20 |
| Fuerunt ambæ infra Polum. | |
| Declin. lucidæ Perfei in Merid. | |
| infra Polum | 48 23 |
| altissima | 48 19 |
| | 48 19 $\frac{1}{4}$ |
| Declin. supra Polum | 48 19 |
| Repetita vtroque pin. | 48 19 |
| Refraçtio | 4' |
| Inter Stellam polarem | 16 34 $\frac{1}{4}$ |
| & lucidam \square vrfæ | 16 34 $\frac{1}{4}$ |
| minoris per Sext. | 16 34 $\frac{1}{4}$ |
| cum eßent infra | 16 34 $\frac{1}{2}$ |
| polum | 16 34 $\frac{1}{2}$ |
| Inter Stellam polarem | 18 52 $\frac{1}{2}$ |
| & alteram in | 18 53 |
| vrfa minore | 18 52 $\frac{2}{3}$ |
| | 18 52 $\frac{2}{3}$ |
| | 18 52 $\frac{3}{4}$ |
| Altit. minima Merid. lucidi- | |
| oris in \square vrfæ min. | 41 45 $\frac{1}{4}$ |
| Alt. min. alterius minus luc. | |
| per Quad. | 39 13 $\frac{1}{2}$ |
| Alt. max. lucidæ Perfei | 82 25 |
| Alt. mer. præced. pedis Perfei | 64 39 $\frac{3}{4}$ |
| Decl. lucidioris in \square vr. min. | 75 51 $\frac{3}{4}$ |
| | 75 51 $\frac{3}{4}$ |
| Decl. alterius in \square vrfæ min. | 73 20 bis |
| Inferioris duarum præced. | |
| in rotis vrfæ mai. | 58 34 $\frac{1}{2}$ |
| a polo ad ort. | 58 34 $\frac{1}{4}$ |
| Superioris duarum | 63 57 $\frac{1}{3}$ |
| in rotis vrfæ mai. | 63 57 |
| Alt. max. lucidæ Perfei | 82 25 |
| Decl. e maxima alt. | 48 19 $\frac{1}{2}$ |
| Alt. min. lucidæ Perfei | 14 16 |
| Decl. e minima alt. | 48 21 $\frac{1}{2}$ |
| Eft igitur hic faltem differentia quæ per refractionem fit 2 minutorum. | |
| DIE 19 JANUARIJ, VESPERI. | |
| Lucidæ in \square vrfæ min. Declin. | |
| in alt. min. | 75 51 |

| | |
|--------------------------------|---------------------|
| Repetita | 75 51 $\frac{1}{4}$ |
| Alterius minus lucidæ | 73 20 |
| Luc. lateris Perfei per Volub. | 82 24 $\frac{1}{4}$ |
| Repetita | 82 24 $\frac{5}{8}$ |
| Lucidior duarum vrfæ min. | 41 45 $\frac{1}{4}$ |
| Eadem per Q. Max. Chalyb. | 41 45 $\frac{1}{2}$ |

DIE 24 JANUARIJ.

| | |
|--------------------------------------|---------------------|
| Sin. genu Perfei per Q. Volub. | 72 49 $\frac{1}{2}$ |
| per Q. Chalyb. | 72 50 |
| Altit. lucidæ in calce pedis Perfei, | |
| per Mural., | |
| nouo faltem pin. | 64 40 $\frac{1}{2}$ |

1588 DIE 24 JANUARIJ².

| | |
|--------------------------------|---------------------|
| Lucidæ duarum in quadrato vrfæ | |
| min. alt. min. | |
| per Q. Volub. | 41 45 $\frac{1}{8}$ |
| per Q. Chalyb. | 41 45 $\frac{1}{2}$ |
| Declin. eiusdem infra vno | 75 51 |
| polum alt. | 75 51 $\frac{1}{4}$ |
| Declin. alterius minus | 73 19 $\frac{1}{2}$ |
| lucidæ | melior |
| | 73 19 $\frac{3}{4}$ |

DIE 30 JANUARIJ.

| | |
|--|---------------------|
| Minima in \square vrfæ minoris in | |
| alt. minima per Q. Volub. | 39 13 $\frac{1}{4}$ |
| per Q. Chalyb. | 39 13 |
| Declin. eiusdem | 73 19 $\frac{3}{4}$ |
| per Arm. max. altero | 73 20 |
| Altera lucidior in \square vrfæ min. | 75 51 $\frac{3}{4}$ |
| altero | 75 51 $\frac{1}{2}$ |

DIE 31 JANUARIJ.

| | |
|---|---------------------|
| Minus lucidæ in \square Vrfæ minoris | |
| Alt. maxima per Volub. | 72 36 |
| per Chalyb. | 72 34 $\frac{1}{2}$ |
| Non satis bene confpiciebatur prop- ter nebulas. | |
| Inter Polarem & lucidam | 16 34 |
| vrfa minoris | 16 33 $\frac{2}{3}$ |
| | 16 34 |
| Inter Polarem & minus | 18 53 |
| lucidam vrfæ | 18 52 $\frac{1}{2}$ |
| minoris, per Sext. Δ | 18 52 $\frac{1}{3}$ |
| cum eßent supra Polum | 18 52 $\frac{1}{2}$ |

¹ Hæc obfervatio et tres fequentes mane inftitui non potuerunt.² E codice D. defunt in codice V.

Distantia lucidæ vrfæ minoris a Polari stella cum eſet ſupra eam iuxta verticem erat 16 34, quando vero infra illam proxima Horizonti 16 34 $\frac{1}{4}$, quod proxime concordat oftenditque refractionem nullam inſinuari, præfertim cum ſit diſtantia infra quæ per refractionem minor redderetur. Sic altera minus lucida habet ſupra Polum diſtantiam 18 52 $\frac{1}{2}$, infra vero 18 52 $\frac{3}{4}$, quod idem probat indicioque eſt nullam inſinuari refractionem in his duabus ſtellis.

DIE 4 FEBRUARIJ, VESPERI.

| | |
|------------------------|---------------------|
| Borealis pedis Ericht. | |
| per Mural. | 66 30 $\frac{1}{2}$ |
| per Volub. | 66 30 $\frac{1}{8}$ |
| per Chalyb. | 66 30 |
| Sequens hædorum | |
| per Volub. | 74 39 $\frac{1}{2}$ |
| per Chalyb. | 74 39 $\frac{5}{8}$ |

DIE 5 FEBRUARIJ.

| | |
|---|-----------------------------------|
| Capellæ Alt. merid. | |
| per Chalyb. | 79 33 $\frac{1}{2}$ |
| per Volub. | 79 33 $\frac{1}{2}$ |
| Stellæ in Dracone | { per Chalyb. 28 22 $\frac{5}{8}$ |
| Alt. min. verſ. ſeptent. | |
| | { per Volub. 28 23 |
| Luc. capitis Draconis Alt. min. verſus ſeptent. | per Chalyb. 17 31 |
| per Volub. | 17 31 $\frac{1}{4}$ |

DIE 7 FEBRUARIJ.

| | |
|--|----------------------------|
| Bor. ped. Erichthonij | 66 30 $\frac{3}{4}$ |
| per Chalyb. | 66 30 |
| Lucidæ in □ vrfæ min. Alt. max. | |
| per Chalyb. | 70 4 $\frac{1}{2}$ |
| per Volub. | 70 4 $\frac{2}{3}$ |
| Sequentis in □ vrfæ min. Alt. max. | |
| per Chalyb. | 72 37 |
| per Volub. | 72 36 $\frac{3}{4}$ |
| Decl. lucidior. in vrfæ min., | |
| | vno 75 49 $\frac{1}{2}$ |
| | altero 75 49 $\frac{3}{4}$ |
| Declin. alterius in vrfæ min. | 73 19 |
| vnico pinn. N. B. Erat ſaltem mediocriter ſerenum. | |

Oculus Draconis in Alt. min.

per Chalyb. 18 35 $\frac{1}{4}$

per Volub. 18 35

Decl. eiſdem per Arm.,

vno pin. 52 41 $\frac{1}{2}$

altero 52 41 $\frac{1}{4}$

Auris Draconis Alt. min.

per Chalyb. 17 31 $\frac{1}{3}$

per Volub. 17 31 $\frac{1}{6}$

Decl. eiſdem per Arm., vno 51 37

altero 51 36 $\frac{1}{2}$

DIE 8 FEBRUARIJ, MANE.

| | |
|---------------------------------|---------------------|
| Decl. Lucidioris in □ | 75 50 $\frac{1}{2}$ |
| Vrfæ min. | 75 50 $\frac{1}{4}$ |
| Declin. alterius minus lucidæ | |
| in vrfæ minore, vno pin. | 73 18 $\frac{2}{5}$ |
| altero | 73 18 $\frac{3}{4}$ |
| Lucidioris Decl. repetita | 75 50 $\frac{2}{3}$ |
| | 75 50 $\frac{1}{2}$ |
| Alterius Decl. repetita. | 73 18 $\frac{2}{5}$ |
| | 73 19 |
| Lucidioris in □ vrfæ mai. | |
| Alt. max. per Volub. | 70 4 $\frac{3}{4}$ |
| per Chalyb. | 70 4 $\frac{1}{2}$ |
| Alterius minus lucidæ Alt. max. | |
| per Volub. | 72 36 $\frac{3}{4}$ |
| per Chalyb. | 72 36 $\frac{3}{4}$ |
| Declin. | 73 18 $\frac{1}{2}$ |
| Declin. Lucidioris repetita | 75 50 $\frac{1}{2}$ |
| N. B. Erat bene ſerenum. | |

DIE 11 FEBRUARIJ.

| | |
|---------------------------------|---------------------|
| Lucidæ vrfæ min. Decl. vno | 75 51 |
| alt. | 75 50 $\frac{1}{2}$ |
| Alterius minus lucidæ, vno | 73 18 $\frac{1}{2}$ |
| alt. | 73 19 |
| Repetita decl. lucidioris | 75 50 $\frac{3}{4}$ |
| | 75 50 $\frac{1}{2}$ |
| Repet. declin. alterius, vtroq. | 73 19 |

DIE 12 FEBRUARIJ, A. M.

| | |
|--------------------------------|---------------------|
| Alt. Stellæ Polaris per Volub. | 52 59 $\frac{1}{6}$ |
| minima per Chalyb. | 52 59 $\frac{1}{2}$ |

Distantia Stellæ Polaris a polo ad initium huius anni eſt P. 2 M. 55 S. 30. Quod ſi obſervationem anni antecedentis in conſilium adhibebis 2° 55' 40".

Eodem Die post Merid.

| | | |
|---------------------------|-----------|------------------|
| Capellæ in Merid. Alt. | 79 | 34 |
| per Chalyb. | 79 | 33 $\frac{2}{3}$ |
| Declinatio | 45 | 29 |
| | 45 | 28 $\frac{5}{6}$ |
| Dexter humerus per Volub. | 78 | 53 |
| Erichtonij per Chalyb. | 78 | 53 $\frac{3}{4}$ |
| Declin. B. vtroque pin. | 44 | 48 $\frac{1}{2}$ |
| Dextra manus Ericht. | | |
| per Chalyb. | 71 | 10 $\frac{1}{3}$ |
| per Volub. | 71 | 10 $\frac{1}{4}$ |
| Declin. eius | vno 35 | 5 $\frac{1}{3}$ |
| | altero 35 | 5 $\frac{1}{2}$ |
| Lucidæ Capitis Draconis | | |
| Alt. min. per Chalyb. | 17 | 31 $\frac{3}{4}$ |
| Declin. eius | vno 51 | 37 $\frac{1}{4}$ |
| | alt. 51 | 37 |

DIE 14 FEBRUARIJ.

| | | |
|-----------------------------|-----------|------------------|
| Caudæ Cygni Alt. per Volub. | 9 | 50 |
| minima per Chalyb. | 9 | 50 $\frac{1}{2}$ |
| Declin. eiusdem, | vno 43 | 55 $\frac{1}{2}$ |
| | altero 43 | 55 $\frac{1}{4}$ |

DIE 15 FEBRUARIJ.

| | | |
|------------------------------|-----------|------------------|
| Præced. Lucidiorum in capite | | |
| Draconis in Merid., | | |
| Alt. min. per Volub. | 18 | 35 |
| per Chalyb. | 18 | 35 $\frac{1}{4}$ |
| Declin. eiusdem | | |
| per Arm., | vno 52 | 40 $\frac{1}{2}$ |
| | altero 52 | 40 $\frac{3}{4}$ |
| Sequentis capitis Draconis | | |
| Alt. minima | 17 | 31 $\frac{2}{3}$ |
| | 17 | 31 $\frac{1}{3}$ |
| Declin. per Armill. | vno 51 | 36 $\frac{3}{4}$ |
| | altero 51 | 37 |

DIE 20 FEBRUARIJ, MANE.

| | | |
|---|----|-------|
| Stellæ Polaris Alt. min. | | |
| per Chalyb. | 52 | 59 20 |
| per Volub. | 52 | 59 15 |
| Distantia Stellæ Polaris ab ipso polo | | |
| colligitur ex obseruationibus antecessentis anni in Januario habitis P. 2 | | |
| M. 55 S. 35. | | |
| Altitudo Stellæ polaris minima | | |
| per Chalyb. | 52 | 59 20 |
| Distantia a polo | 2 | 55 35 |

| | |
|------------------------------|----------|
| Vera poli altitudo | 55 54 55 |
| Si per Volub. idem tentetur, | |
| prouenit eadem | 55 54 50 |

DIE 25 FEBRUARIJ.

| | | |
|---|----|------------------|
| Lucidæ in \square vrsæ min. Declin. cum | | |
| eßet versus | 75 | 50 $\frac{1}{2}$ |
| ortum a polo | 75 | 50 $\frac{3}{4}$ |
| Altera minus lucida | 73 | 19 |
| | 73 | 19 $\frac{1}{4}$ |

DIE 28 FEBRUARIJ.

| | | |
|--------------------------------------|-----------|------------------|
| Lucidæ in \square vrsæ min. decl., | | |
| | vno 75 | 50 $\frac{1}{2}$ |
| | altero 75 | 50 $\frac{3}{4}$ |
| Alterius minus lucidæ | vno 73 | 19 $\frac{1}{2}$ |
| | altero 73 | 19 $\frac{1}{4}$ |
| Cum a polo ad ortum eßent. | | |

DIE 24 JULIJ, VESPERI.

| | | |
|---|----|------------------|
| Distabat lucida Coronæ a sinistro humero Herculis | 22 | 40 $\frac{1}{6}$ |
| | 22 | 40 $\frac{1}{2}$ |
| Inter sinist. humerum Herculis & Lucidam Vulturis | 40 | 18 $\frac{1}{2}$ |
| Inter lucidam sinistri hum. | 42 | 37 |
| Ophiuchi & Vulturem | 42 | 36 $\frac{1}{2}$ |
| Inter dext. hum. Ophiuchi & lucidam Vulturis | 31 | 48 |
| Declin. sinist. hum. Herculis | 25 | 25 $\frac{1}{6}$ |
| | 25 | 25 |
| Declin. sinist. hum. Ophiuchi | 10 | 6 $\frac{1}{2}$ |
| | 10 | 7 |
| Declin. dext. hum. Ophiuchi | 4 | 50 bis |

DIE 10 AUGUSTI, VESPERI.

| | | |
|--|---------|------------------|
| Inter lucid. Vult. & caudam eiusdem | 12 | 10 $\frac{1}{6}$ |
| | 12 | 10 $\frac{1}{6}$ |
| | 12 | 10 |
| Inter lucidam Vulturis & eam quæ est in angulo recto caudæ Vulturis & Roßtri Cygni | 13 | 55 $\frac{1}{6}$ |
| | 13 | 56 |
| Declin. eius | vno 14 | 35 $\frac{1}{2}$ |
| | alt. 14 | 35 |
| Declin. caudæ Vulturis | vno 13 | 19 $\frac{1}{6}$ |
| | 13 | 19 $\frac{1}{2}$ |
| | alt. 13 | 20 |
| Decl. extremæ in austr. ala Cygni | vno 28 | 35 $\frac{1}{2}$ |
| | alt. 28 | 36 |

| | |
|-------------------------------------|---------------------|
| Decl. mediæ inter pectus & extremam | |
| sinistræ | 44 10 $\frac{1}{2}$ |
| alæ Cygni | 44 10 |
| Declinatio eius quæ est infra | |
| sinist. alam Cygni, vno | 20 53 $\frac{3}{4}$ |
| altero | 20 54 |

DIE 3 OCTOBRIS P. M.

| | |
|---------------------------------|-------------------------|
| Distantia inter os Pegasi & | 46 16 $\frac{2}{3}$ |
| præcedentem ex duabus | 46 16 $\frac{5}{6}$ |
| inferioribus Lyræ | 46 16 $\frac{5}{6}$ |
| Dist. inter os Pegasi & | 44 18 $\frac{3}{4}$ |
| sequentem ex duabus | 44 19 |
| inferioribus Lyræ | 44 19 |
| Decl. præced. ex infer. in Lyræ | 32 57 bis |
| Sequentis ex iisdem | 32 10 $\frac{1}{2}$ bis |
| Inter os Pegasi & extremam | 52 31 |
| superioris alæ Cygni | 52 31 $\frac{1}{2}$ |
| | 52 31 |

| | |
|------------------------------|---------------------|
| Inter os Pegasi & penultimam | |
| superioris alæ Cygni | 50 0 bis |
| Inter os Pegasi & primam & | 43 34 |
| lucidiorē bor. alæ | 43 33 $\frac{5}{6}$ |
| Cygni | 43 33 $\frac{5}{6}$ |
| Inter os Pegasi & superiorem | 44 11 $\frac{1}{2}$ |
| borealis pedis Cygni | 44 11 |
| Inter os Pegasi & inferiorem | |
| borealis pedis Cygni | 41 34 bis |
| Inter os Pegasi & mediam | 27 30 $\frac{1}{2}$ |
| inferioris alæ Cygni | 27 30 $\frac{3}{4}$ |
| Decl. mediæ austr. alæ Cygni | 32 28 $\frac{1}{2}$ |
| Decl. extrem. austr. alæ | |
| Cygni | 28 35 $\frac{1}{2}$ |

DIE 24 OCTOBRIS, VESPERI.

| | |
|------------------------------|---------------------|
| Inter os Pegasi & extremam | |
| superioris alæ Cygni | 52 30 $\frac{3}{4}$ |
| Inter os Pegasi & penultimam | |
| superioris alæ Cygni | 50 0 $\frac{1}{4}$ |
| Inter os Pegasi & primam | |
| borealis alæ Cygni | 43 33 $\frac{1}{2}$ |
| Inter os Pegasi & superiorem | |
| borealis pedis Cygni | 42 11 $\frac{1}{4}$ |
| Inter os Pegasi & inferiorem | |
| borealis pedis Cygni | 41 35 |
| Dist. oris Pegasi & præced. | 46 16 $\frac{1}{2}$ |
| ex inferioribus Lyræ | 46 17 |

DIE 25 OCTOBRIS.

| | |
|---------------------------|---------------------|
| Inter os Pegasi & lucidam | 27 31 $\frac{5}{6}$ |
| primam infer. alæ Cygni | 27 31 $\frac{3}{4}$ |

| | |
|------------------------------|--------------------------|
| Inter os Pegasi & inferiorem | 21 38 |
| eiusdem alæ Cygni vers. | |
| austr. | 21 38 |
| Decl. primæ inferi- | vno 32 29 $\frac{1}{4}$ |
| oris alæ Cygni | alt. 32 29 $\frac{1}{4}$ |
| Decl. sequentis in eadem ala | 28 35 $\frac{1}{2}$ |
| | 28 35 $\frac{1}{2}$ |
| Primæ superioris alæ Cygni | 44 11 |
| | 44 10 $\frac{3}{4}$ |

| | |
|------------------------------|---------------------|
| Præcedentis in bor. pede | |
| Cygni | 45 33 $\frac{1}{4}$ |
| Sequent. sive super. in pede | |
| bor. | 46 30 $\frac{1}{2}$ |
| Extremæ super. alæ Cygni | 52 38 $\frac{3}{4}$ |
| Penultimæ eiusdem alæ | |
| Cygni | 50 54 $\frac{1}{2}$ |
| Superioris duarum in infer. | 32 57 |
| parte corporis Lyræ | 32 56 $\frac{5}{6}$ |
| Inferioris duarum in Lyræ | 32 10 $\frac{3}{4}$ |
| | 32 10 $\frac{5}{6}$ |

Eodem die 25 Vesperi.

| | |
|-----------------------------------|-------------------------|
| Declin. præcedentis in inferiori | |
| parte Lyræ | 32 57 B. |
| Repetita | 32 57 $\frac{1}{6}$ |
| Decl. sequent. in infer. | |
| parte Lyræ | 32 11 |
| Repetita | 32 11 $\frac{1}{4}$ |
| Inter os Pegasi & | |
| præcedentem ex duabus | |
| in inferioribus Lyræ | 46 17 bis |
| Inter os Pegasi & sequent. ex | 44 18 $\frac{2}{3}$ |
| infer. Lyræ | 44 18 $\frac{1}{2}$ |
| Inter extremam alæ Pegasi & | |
| primam in dextra | I 32 10 $\frac{5}{6}$ |
| manu \approx quæ | II 32 11 $\frac{1}{2}$ |
| præcedens est | III 32 11 $\frac{2}{3}$ |
| Potes hic ponere 32° 11' vel | 32 11 $\frac{1}{4}$ |
| Dist. inter extremam alæ | |
| Pegasi & med. inferiorum | |
| trium in dextra manu \approx | 29 57 $\frac{1}{3}$ ter |
| Declin. eiusdem in manu \approx | 2 4 $\frac{1}{2}$ |
| | 2 5 |
| Inter extremam alæ Pegasi & | |
| ultimam trium inferio- | 28 35 $\frac{3}{4}$ |
| rum in dextra manu \approx | 28 35 $\frac{3}{4}$ |
| Alt. stellæ Polaris max. | |
| per Q. Ferreum | 58 49 $\frac{2}{3}$ |
| per Q. Ligneum | 58 49 $\frac{3}{4}$ |
| Non erat satis ferenum. | |

DIE 5 DECEMBRIS, VESPERI.

Dist. inter Vult. & stellulam conficien-
tem angulum rectum 13 54⁵/₆
cum rostro Cygni & 13 54
Lucida Vulturis, quæ vultus 13 54⁵/₆
sum in Cometa anni 80¹.

Decl. eiusdem
prædictæ stellulæ 14 38
Eadem declin. repetita 14 37¹/₂
Repetita 14 37¹/₂

DIE 6 DECEMBRIS, VESPERI.

Declin. caudæ Aquilæ 13 21¹/₂
Eius dist. a lucida Vult. 12 9¹/₂
Repetita 12 9¹/₄
H. 6 M. 55 ἐν πλάττει transijt stella Pola-
ris Meridianum habens alt. max.
per Chalyb. 58 49¹/₂
per Volub. 58 49²/₃

Verior & exquiritior alt. max. est 58°
49' 35" quod est medium inter vtram-
que obseruationem, nam is qui per
Chalyb. obseruabat paululum plus vi-
debat quam semisem minuti ultra 49'.
Is vero qui per Volub. paululum minus
quam ²/₃ vnus minuti, vt vterque mox
referebat, consentiente ob id obserua-
tione in idem quasi scrupulum secun-
dum, vt ob id sit exacta altitudo maxi-
ma 58° 49' 35".

DIE 14 DECEMBRIS, VESPERI.

Dist. inter lucidam Lyræ & lucidam
capitis Draconis quæ 14 33³/₄
est 5 numero 14 33⁵/₆ fere
Pro examine Sextantis noui obserua-
batur dist. inter oculum ☿ & luci-
dam ♀ 35 32¹/₂ ter
Inter lucidam ☐ vrsæ minoris &
lucid. cap. Draconis 29 32⁵/₆ bis
Inter caudam Cygni &
lucid. in capite Draconis 27 39
quæ est numero 5 27 39¹/₄
Inter luc. cap. Drac. & supremam præ-
cedentium in ☐ vrsæ 51 31¹/₃
maior. quæ est in dorso 51 31¹/₄
Inter lucid. cap. Drac. & inferio-
rem priorum in ☐ vrsæ 55 15¹/₂
maioris quæ est in aluo 55 15⁵/₆

Inter lucid. cap. Draconis & inferior.
ac lucidior. duarum sequentium
in ☐ vrsæ maioris quæ 51 13¹/₆
est in femore 51 13
Inter lucid. cap. Drac. & pri- 42 42¹/₂
mam caudæ vrsæ maior. 42 42¹/₄
Inter lucidam cap. Drac. & 39 20¹/₆
mediam caudæ vrsæ mai. 39 19¹/₄
Dist. inter luc. cap. Drac. & 38 31
extrem. caudæ vrsæ mai. 38 30³/₄
Inter lucid. cap. Drac. &
superiorem duarum se- 46 49³/₄
quentium in ☐ vrsæ ma- 46 50¹/₄
ioris quæ est minus lucida 46 49³/₄

DIE 15 DECEMBRIS, MANE.

H. 6 M. 1¹/₆ Alt. stellæ Polaris minima per
correctum per Chalyb. 53 0 8
Horologium per Volub. 52 59¹/₂

EODEM DIE VESPERI

post denuo & melius correctæ vtraque
instrumenta obseruabatur stella Pola-
ris in maxima altitudine meridianâ

H. 5 M. 51 proxime per horologium,
per Chalyb. 58 49⁵/₆
per Volub. 58 49²/₃
53 0 8 52 59 30
58 49 50 58 49 40
5 49 42 5 50 10
2 54 51 2 55 5
55 54 59 55 54 35

H. 5 57 per Volub. vt prius 58 49²/₃
per Chalyb. 58 49³/₄

Inter caudam Cygni & alteram in cap.
Draconis lucidam quæ est in oculo
numero 3 31 35¹/₄
Repetita 31 35

Dist. inter caudam Cygni & 44 30³/₄
minus lucidam in ☐ 44 31¹/₄
vrsæ maioris 44 31

Dist. caudæ Cygni & illius quæ
est in recta linea cum lu-
cida ☐ vrsæ minoris &
lucid. cap. Drac. quæ 39 49¹/₂
est 25 Drac. 39 49³/₄

Inter caudam Cygni &
borealiorem in triangulo
Draconis 31 55¹/₄ bis

¹ Hæc stella est ε Aquilæ, a Paulo Wittichio die 26 Octobris 1580 cum cometa observata (H. 7 M. 45).

Inter caudam Cygni & lucidam corporis Drac. quæ est fere in recta linea cum cauda Cygni & 25 11 $\frac{1}{2}$
lucida minoris vrsæ 25 11

DIE 16 DECEMBRIS, MANE.

Post rectificatos vtrosque quadrantes
Altitud. stellæ Polaris minima
per Volub. 52 59 35
per Chalyb. 52 59 40
N. B. Prouenit ex his Alt. Poli 55 54 $\frac{3}{4}$.

Eodem die 16 Decemb. Vesper.

Post adhuc magis correctum instrumentum.

H. 5 53 $\frac{1}{2}$ Stella Polaris in maxima Altitud.
mer. per Chalyb. 58 49 45

vel 50

per Volub. 58 49 42 $\frac{1}{2}$

Alt. merid. I in cauda vrsæ maioris

per Volub. 24 8

per Chalyb. 24 9

Declin. genu anterioris (sinistri)

vrsæ maioris vtroque 53 30

Decl. superioris duarum in

præcedente ante- vno 49 37

riorum pedum alt. 49 36 $\frac{1}{2}$

Declin. australioris duarum

eiusdem pedis vno 48 43 $\frac{1}{2}$

altero 48 43 $\frac{3}{4}$

Declin. genu præcedentis

posteriorum pedum vrsæ

maioris vno 46 43 $\frac{1}{2}$

altero 46 43

Declin. superioris duarum

in præcedente pedum

posteriorum vno 44 57 $\frac{1}{2}$

altero 44 57

Declin. inferioris duarum in

antecedente posteriorum

pedum vtroque 43 32 $\frac{1}{2}$

Inter luc. \square vrsæ min. & ro-

strum & os vrsæ maioris 34 11 bis

Inter luc. \square vrsæ minoris &

lucidiorum in collo vrsæ 28 25 $\frac{1}{2}$

maioris 28 25 $\frac{3}{4}$

Inter lucidam \square vrsæ minoris & lu-

cidiorum in pectore vrsæ maioris,

quæ est in recta linea cum duabus

australioribus in \square eiusdem ma-

ioris plaufti 30 28 $\frac{3}{4}$

Inter super. caput II & borealiorem in
præcedente seu sinistro 22 46

pede vrsæ maioris 22 45 $\frac{5}{6}$

Inter super. caput II & austr-

liorem in eodem pede 22 48 $\frac{1}{6}$

Inter superius caput II &

illam quæ est in genu fin. 29 20 $\frac{3}{4}$

anteriori 29 20 $\frac{5}{6}$

Inter super. caput. II & supe-

riorem vel borealiorem

duarum in præced. pe-

dum posterior. 33 43

Inter super. cap. II &

australior. duarum in 34 35 $\frac{1}{2}$

eodem pede 34 36

Inter super. cap. II & genu

eiusdem pedis antero-

ris posteriorum vno 43 15 $\frac{3}{4}$

altero 43 15 $\frac{3}{4}$

DIE 18 DECEMBRIS, MANE.

Alt. stellæ Pol. min.

per Chal. 52 59 $\frac{3}{8}$

per Volub. 52 59 35

Alt. min. Flexuræ Capiopeæ

per Chalyb. 24 24 $\frac{5}{6}$

per Volub. 24 23 $\frac{5}{6}$

Stellæ polaris hoc anno 88 in

Decembri per Chal. rectificatum.

Alt. maxima 58 49 50

Alt. minima 52 59 40

Diam. circuli 5 50 10

Dist. a Polo 2 55 5

Elevatio Poli 55 54 45

Alt. Æquatoris 34 5 15

Alt. Spicæ 25 8 25

Decl. Spicæ 8 56 50

Eodem die 18. Dec., Vesper.

Altitud. merid. stellæ Polaris max.

per Volub. 58 49 40

per Chalyb. 58 49 45

Alt. merid. min. primæ

in cauda vrsæ maioris

per Chalyb. 24 8 $\frac{5}{6}$

per Volub. 24 8

Alt. mer. lucidæ cinguli Androm.

per Chalyb. 67 30 $\frac{3}{4}$

per Volub. 67 30 $\frac{1}{3}$

39

| | |
|---|--------------------------|
| <i>Lucidior</i> \square <i>vrfa minoris</i> | |
| <i>Decl. per Arm. infra</i> | 75 50 $\frac{1}{2}$ |
| <i>Polum</i> | 75 50 $\frac{2}{3}$ |
| <i>Altera minus lucida, vtroq.</i> | 73 18 $\frac{3}{4}$ |
| <i>Alt. stellæ Draconis quæ</i> <i>tertia est in cauda</i> | |
| <i>per Chalyb.</i> | 32 16 40 |
| <i>per Sext.</i> | dubia 32 15 |
| <i>per Volub.</i> | 32 16 25 |
| <i>Eiusdem stellæ decl.</i> | vno 66 21 $\frac{1}{4}$ |
| <i>per Armillas</i> | alt. 66 21 $\frac{1}{2}$ |
| <i>Repetita decl. duarum in</i> <i>vrfa minore: Maior.</i> | vno 75 50 35 |
| | alt. 75 50 30 |
| <i>Minor. inf.</i> | vno 73 18 30 |
| | alt. 73 18 30 |
| <i>Lucidæ in</i> \square <i>vrfa minor. alt. minima</i> | |
| <i>per Chalyb.</i> | 41 44 $\frac{1}{3}$ |
| <i>per Volub.</i> | 41 44 $\frac{1}{2}$ |
| <i>per Sext.</i> | 41 45 |
| <i>Minus lucidæ in</i> \square <i>eiusdem</i> | |
| <i>per Chalyb.</i> | 39 12 30 |
| <i>per Volub.</i> | 39 12 25 |
| <i>per Sext.</i> | 39 12 30 |
| DIE 27 DECEMBRIS, MANE. | |
| <i>Altit. stellæ Polaris minima</i> | |

| | |
|--------------------|----------|
| <i>per Chalyb.</i> | 52 59 30 |
| <i>per Volub.</i> | 52 59 35 |

EODEM DIE VESPERI.

| | |
|---|---------------------|
| <i>Extremæ caudæ vrfa maior. Alt. min.</i> | |
| <i>per Chalyb.</i> | 17 19 |
| <i>per Volub.</i> | 17 20 |
| <i>Lucidæ in</i> \square <i>vrfa min. Alt. min.</i> | |
| <i>per Chalyb.</i> | 41 45 |
| <i>per Volub.</i> | 41 45 |
| <i>Alterius minus lucidæ</i> <i>in vrfa minore alt. min.</i> | |
| <i>per Chal.</i> | 39 13 |
| <i>per Volub.</i> | 39 12 $\frac{1}{2}$ |

DIE 28 DECEMBRIS.

| | |
|---|---------------------|
| <i>Mediæ caudæ vrfa maior.</i> | |
| <i>per Chalyb.</i> | 23 2 |
| <i>per Volub.</i> | 23 1 |
| <i>Extr. in cauda vrfa mai.</i> | |
| <i>per Chalyb.</i> | 17 20 $\frac{1}{2}$ |
| <i>per Volub.</i> | 17 19 $\frac{2}{3}$ |
| <i>Lucidæ in</i> \square <i>vrfa min.</i> <i>vtroque quadrante</i> | 41 44 30 |
| <i>Alterius minus luc. Alt. min.</i> <i>per vtrumque quadrant.</i> | 39 12 $\frac{1}{2}$ |

OBSERVATIONES STELLARUM IN ASTERISMIS
AUSTRALIBUS EXTRA ZODIACUM.

DIE 19 JANUARIJ, VESPERI.

| | |
|------------------------------------|---------------------|
| <i>Lucidæ cap. Ceti Alt. max.</i> | 36 32 $\frac{1}{2}$ |
| <i>per Vol.</i> | 36 31 $\frac{1}{2}$ |
| <i>Declin. capitis Ceti lucidæ</i> | 2 25 |
| | 2 25 $\frac{1}{2}$ |

DIE 24 JANUARIJ.

| | |
|---------------------------------------|---------------------|
| <i>Luc. pes Orionis</i> | |
| <i>per Q. Chalyb.</i> | 25 21 $\frac{1}{4}$ |
| <i>per Q. Volub.</i> | 25 23 |
| | dubia |
| <i>Sin. humerus Orio. per Chal.</i> | 40 0 $\frac{1}{2}$ |
| <i>per Volub.</i> | 40 0 |
| <i>Postea non erat satis serenum.</i> | |
| <i>Prima balthei Orion.</i> | |
| <i>per Chal.</i> | 33 26 |
| <i>per Volub.</i> | 33 25 |

| | |
|------------------------------------|---------------------|
| <i>Secunda balthei per Chal.</i> | 32 34 $\frac{1}{3}$ |
| <i>per Volub.</i> | 32 34 $\frac{1}{3}$ |
| <i>Tertia balthei per Volub.</i> | 31 51 $\frac{2}{3}$ |
| <i>per Chalyb.</i> | 31 52 $\frac{2}{3}$ |
| <i>Dexter humer. Or. per Chal.</i> | 41 20 $\frac{5}{8}$ |
| <i>per Volub.</i> | 41 20 $\frac{5}{8}$ |

Eodem tempore altitudines per Mura-
lem:

| | |
|------------------------------------|---------------------|
| <i>Præced. pes Orion., vtroque</i> | 25 21 $\frac{1}{2}$ |
| <i>Præcedens humerus novo</i> | 39 59 $\frac{1}{4}$ |
| <i>Orionis vet.</i> | 40 0 |

Trabs nonnihil impediuit.

| | |
|---|---------------------|
| <i>Cæteras in baltheo Orionis ob tra-</i> <i>bem illic affixam obseruare non potui</i> | |
| <i>Sequens hum. Orion. nouo</i> | 41 20 $\frac{1}{2}$ |
| <i>vet.</i> | 41 20 $\frac{1}{2}$ |

DIE 30 JANUARIJ.

| | |
|------------------------------|-----------------------------------|
| Sinister humerus Orionis | |
| per Volub. | 39 59 ⁵ / ₉ |
| per Chal. | 40 0 |
| Prima balthei per Volub. | 33 25 |
| Media in baltheo per Volub. | 32 33 ¹ / ₄ |
| per Chalyb. | 32 33 ² / ₃ |
| Tertia balthei per Volub. | 31 51 ² / ₃ |
| per Chalyb. | 31 52 ¹ / ₆ |
| Dexter pes Orion. per Volub. | 24 13 |
| per Chalyb. | 24 14 |
| Dexter hum. Orion. | 41 20 ² / ₃ |
| | 41 20 ¹ / ₄ |

DIE 4 FEBRUARIJ, VESPERI.

Per Muralem.

| | |
|-----------------------------|--|
| Lucidæ exuviarum alt. mer. | 28 25 |
| Lucidæ pedis Orionis | 25 21 ¹ / ₂ |
| Humeri præcedentis | nouo 39 59 ⁵ / ₉ |
| | vet. 40 0 |
| I in cingulo Orionis | 33 25 |
| II | vet. 32 33 ² / ₃ |
| | nouo 32 33 ¹ / ₂ |
| III | 31 51 ⁵ / ₆ |
| Sequentis pedis Or. | vet. 24 13 ¹ / ₆ |
| | nouo 24 13 |
| Humeri Or. sequent. | 41 20 ¹ / ₆ |
| | 41 20 ¹ / ₄ |
| Lucidus pes Orion. | |
| per Volub. | 25 21 ¹ / ₃ |
| per Chalyb. | 25 22 ¹ / ₆ |
| Sinister humerus per Chal. | 40 0 |
| per Volub. | 39 59 ³ / ₄ |
| Prima balthei per Chalyb. | 33 25 ¹ / ₆ |
| per Volub. | 33 25 |
| Secunda balthei per Chalyb. | 32 33 ¹ / ₂ |
| per Volub. | 32 33 ¹ / ₃ |
| Tertia balthei per Chalyb. | 31 52 |
| Dexter pes Orionis | |
| per Chalyb. | 24 13 ¹ / ₂ |
| per Volub. | 24 13 |
| Dexter humerus Orionis | |
| per Chal. | 41 20 ¹ / ₂ |
| per Volub. | 41 20 ² / ₄ |
| Prima Eridani per Chalyb. | 28 25 |
| per Volub. | 28 24 ¹ / ₄ |

DIE 5 FEBRUARIJ.

| | |
|-----------------------------|--|
| Superioris trium lucidiorum | |
| in exuvijs Ω , | vet. 40 15 ¹ / ₂ |

| | |
|--------------------------------------|--|
| Infimæ earundem | vet. 35 47 ¹ / ₂ |
| Lucidæ in exuvijs | 28 24 ⁵ / ₆ |
| Lucidi pedis Orionis | 25 21 ¹ / ₃ |
| | 25 21 ¹ / ₂ |
| Humeri præced. Orionis | 40 0 |
| | 40 0 ¹ / ₂ |
| I in cingulo Orionis | 33 25 |
| Secundæ in cingulo | 32 33 ² / ₃ |
| Tertiæ in cingulo | 31 51 ³ / ₄ |
| Pedis Orion. sequentis | nouo 24 13 |
| | vet. 24 13 ¹ / ₄ |
| Humeri Orion. sequentis | |
| | nouo 41 20 ¹ / ₂ |
| | vet. 41 20 ¹ / ₃ |
| Duarum præcedentis in \square | |
| corporis leporini | 12 59 ¹ / ₄ |
| Sequentis in \square corp. Leporis | 15 56 ² / ₃ |
| In pede Canis maioris | 16 18 ¹ / ₆ |
| | 16 18 ¹ / ₃ |
| Præcedens lucidiorum in ex- | |
| uvijs quas tenet Orion | |
| per Chalyb. | 40 15 ¹ / ₂ |
| per Volub. | 40 15 ¹ / ₂ |
| Sequens in exuvijs | |
| per Chalyb. | 38 55 ¹ / ₂ |
| per Volub. | 38 55 ¹ / ₂ |
| Tertia in exuvijs per Chalyb. | 35 47 ¹ / ₂ |
| per Volub. | 35 47 ¹ / ₂ |
| Prima Eridani per Chalyb. | 28 25 |
| per Volub. | 28 24 ¹ / ₂ |
| Lucidus pes Orionis | |
| per Chalyb. | 25 21 ¹ / ₂ |
| per Volub. | 25 21 ¹ / ₄ |
| Capulus ensis Orionis | |
| per Chalyb. | 31 14 ³ / ₄ |
| per Volub. | 31 14 ¹ / ₂ |
| Sinister humerus Orionis | |
| per Chal. | 40 0 |
| per Volub. | 39 59 ³ / ₄ |
| I balthei Orionis | |
| per Chalyb. | 33 25 |
| per Volub. | 33 25 |
| II balthei per Chalyb. | 32 33 ¹ / ₂ |
| per Volub. | 32 33 ¹ / ₃ |
| III balthei per Chalyb. | 31 52 |
| per Volub. | 31 51 ¹ / ₃ |
| Dexter pes Orionis | |
| per Chalyb. | 24 13 ² / ₃ |

Dexter humerus Orionis

| | | |
|-----------------------------|----|-----------------|
| per Chal. | 41 | $20\frac{1}{2}$ |
| per Volub. | 41 | $20\frac{2}{3}$ |
| Præcedens pes Canis maioris | | |
| per Chal. | 16 | $18\frac{2}{3}$ |
| per Volub. | 16 | $18\frac{2}{3}$ |

DIE 7 FEBRUARIJ.

| | | |
|---------------------------|--------|-------------------|
| Lucidæ exuviarum | 28 | $24\frac{5}{6}$ |
| | 28 | $24\frac{3}{4}$ |
| Lucidi pedis Orionis | 25 | $21\frac{1}{2}$ |
| | 25 | $21\frac{1}{3}$ |
| Præced. humeri Orionis | 39 | $59\frac{5}{6}$ |
| | 40 | 0 |
| Prima Eridani per Chalyb. | 28 | 25 |
| per Volub. | 28 | $24\frac{1}{2}$ |
| Lucidus pes Orion. | | |
| per Chalyb. | 25 | 22 |
| per Volub. | 25 | $21\frac{1}{2}$ |
| Declin. per Armillas | 8 | 43 |
| Sinifter humerus Orionis | | |
| per Chalyb. | 40 | 0 |
| per Volub. | 39 | $59\frac{2}{3}$ |
| Decl. eius per Arm., | | |
| vtroq. pin. | 5 | 55 |
| I Balthei Decl. Auft. | vno | 0 40 |
| | altero | 0 $39\frac{3}{4}$ |
| II Balthei per Arm. | vno | 1 $31\frac{1}{4}$ |
| | altero | 1 31 |
| III Balthei Decl. M. | vno | 2 13 |
| | altero | 2 13 |
| Dextri humeri Orion. | vno | 7 $15\frac{3}{4}$ |
| Declin. B. | alt. | 7 16 |

DIE 8 FEBRUARIJ.

| | | |
|-----------------------|----|-----------------|
| Sin. humerus Orionis | 39 | $59\frac{1}{3}$ |
| per Chalyb. | 40 | 0 |
| Prima balthei | 33 | 24 |
| per Chalyb. | 33 | $25\frac{1}{3}$ |
| Dexter humerus Orion. | | |
| per Chalyb. | 41 | $20\frac{3}{4}$ |
| per Volub. | 41 | $20\frac{1}{2}$ |

DIE 10 FEBRUARIJ.

| | | |
|------------------------------|--------|-------------------|
| Sin. humerus Or. per Chalyb. | 39 | $59\frac{5}{6}$ |
| per Volub. | 39 | $59\frac{2}{3}$ |
| Declin. eiusdem | vno | 5 55 |
| | altero | 5 $54\frac{5}{6}$ |

DIE 11 FEBRUARIJ.

| | | |
|-----------------------------|--------|-------------------|
| Prima Eridani per Chal. | 28 | 25 |
| per Volub. | 28 | 25 |
| Decl. eiusdem Auft. | | |
| per Armillas | vno | 5 40 |
| | altero | 5 $39\frac{3}{8}$ |
| Lucidus pes Orionis | | |
| per Chalyb. | 25 | 22 |
| per Volub. | 25 | $21\frac{1}{2}$ |
| Declin. eius per Armill. | vno | 8 $43\frac{1}{4}$ |
| | alt. | 8 $43\frac{1}{3}$ |
| Sin. humerus Orionis | | |
| per Chalyb. | 40 | 0 |
| per Volub. | 39 | $59\frac{2}{3}$ |
| Declin. eius per Armill. | vno | 5 55 |
| | alt. | 5 $54\frac{5}{8}$ |
| Prima balthei per Chalyb. | 33 | 25 |
| per Volub. | 33 | $24\frac{1}{4}$ |
| Decl. eiusd. per Arm. | vno | 0 $39\frac{3}{8}$ |
| | altero | 0 40 |
| Secunda balthei per Chalyb. | 32 | $33\frac{1}{2}$ |
| per Volub. | 32 | $33\frac{1}{2}$ |
| Declin. eiusdem | vno | 1 $31\frac{1}{4}$ |
| per Armillas | alt. | 1 $31\frac{1}{2}$ |
| Tertia balthei per Chalyb. | 31 | 52 |
| per Volub. | 31 | $51\frac{2}{3}$ |
| Declin. eiusdem | vno | 2 $13\frac{1}{4}$ |
| | alt. | 2 $13\frac{1}{2}$ |
| Dexter pes Orionis | | |
| per Chalyb. | 24 | 13 |
| per Volub. | 24 | $12\frac{1}{2}$ |
| Declin. eius auft. | vno | 9 52 |
| | altero | 9 $51\frac{5}{6}$ |
| Dexter humerus per Chalyb. | 41 | $20\frac{1}{2}$ |
| per Volub. | 41 | $20\frac{1}{2}$ |
| Declin. eius bor. | vno | 7 16 |
| | altero | 7 $16\frac{1}{4}$ |

DIE 14 FEBRUARIJ.

| | | |
|-------------------------|--------|------------------|
| Ceruix Canis min. | | |
| per Chalyb. | 43 | $8\frac{1}{2}$ |
| per Volub. | 43 | $8\frac{1}{2}$ |
| Decl. eius per Armill., | vno | 9 $3\frac{1}{3}$ |
| | altero | 9 $3\frac{1}{2}$ |

DIE 15 FEBRUARIJ.

| | | |
|-------------------|----|----------------|
| Ceruix Canis min. | | |
| per Volub. | 43 | $8\frac{1}{3}$ |
| per Chalyb. | 43 | $8\frac{1}{4}$ |

| | | |
|-------------------------|----------|------------------|
| Decl. eius B. | vno 9 | 3 $\frac{1}{2}$ |
| | altero 9 | 3 $\frac{1}{4}$ |
| Canis minor per Chalyb. | 40 | 18 $\frac{1}{2}$ |
| per Volub. | 40 | 18 $\frac{3}{4}$ |
| Declin. eius B. | vno 6 | 13 $\frac{1}{2}$ |
| | alt. 6 | 13 $\frac{1}{4}$ |

DIE 19 FEBRUARIJ.

| | | |
|------------------------|----|----------------------|
| Dexter pes Orionis | | |
| per Volub. | 24 | 12 $\frac{1}{2}$ |
| Dexter humerus Orionis | 41 | 20 $\frac{2}{3}$ |
| Declin. | 7 | 16 |
| Canis maior per Volub. | 17 | 54 |
| per Chalyb. | 17 | 55 $\frac{1}{2}$ |
| | | incerta |
| Inter Canem maiorem & | 5 | 35 $\frac{1}{2}$ bis |
| pedem eius | 5 | 35 |
| | | femel |

DIE 28 FEBRUARIJ.

| | | |
|-----------------------|----|------------------|
| Canis minor in Merid. | | |
| per Tychon. | 40 | 18 $\frac{1}{3}$ |
| per Volub. | 40 | 18 $\frac{1}{2}$ |

DIE 29 FEBRUARIJ.

| | | |
|---------------------------|----|------------------|
| Canis maioris alt. merid. | 17 | 54 $\frac{1}{4}$ |
|---------------------------|----|------------------|

DIE 5 DECEMBRIS, VESPERI.

| | | |
|---|----------|---------------------|
| Dift. inter lucidam capitis Ceti & lucidorem inter boreales in cauda eiusdem in extremitate caudæ | | |
| | 42 | 34 $\frac{5}{8}$ |
| | Repetita | 42 34 $\frac{2}{3}$ |
| Declin. eiusdem præcedentis in cauda Ceti | 11 | 5 M. |
| | 11 | 5 $\frac{1}{4}$ |
| Decl. lucidioris in cauda Ceti Mer. alt. pin. ¹ | 20 | 13 $\frac{1}{2}$ |

| | | |
|--|----|------------------|
| Dift. inter luc. capitis Ceti & australiorem & lucidiorem | 40 | 42 |
| caudæ eiusdem | 40 | 42 |
| Dift. inter lucidam capitis Ceti & præcedentem lucidioris in dorso | 31 | 43 $\frac{1}{2}$ |
| | 31 | 43 $\frac{1}{2}$ |

| | | |
|--|----|-------|
| Decl. eiusdem inferioris in dorso Ceti, vtroque pin. | 12 | 21 M. |
|--|----|-------|

| | | |
|---|----|------------------|
| Dift. inter luc. capitis Ceti & lucidiorem sequentem in dorso | 27 | 22 $\frac{5}{8}$ |
|---|----|------------------|

| | | |
|---------------------------------------|----|----|
| Decl. sequentis in dorso Ceti, vtroq. | 10 | 19 |
|---------------------------------------|----|----|

| | | |
|--|----|-------------------------------------|
| Dift. inter lucidam capitis Ceti & Aldeboram | 26 | 6 $\frac{1}{2}$ vel 6 $\frac{2}{3}$ |
|--|----|-------------------------------------|

| | | |
|-----------------------------------|---|---------------------|
| Decl. lucid. in cap. Ceti, vtroq. | 2 | 25 $\frac{2}{3}$ B. |
|-----------------------------------|---|---------------------|

| | | |
|--|----|-----------------|
| Dift. inter lucid. cap. Ceti & extremam alæ Pegasi | 43 | 2 $\frac{1}{3}$ |
| Eadem repetita | 43 | 2 $\frac{2}{3}$ |

| | | |
|---------------------------|--------|---------------------|
| Decl. lucid. in cap. Ceti | vno 2 | 25 $\frac{2}{3}$ B. |
| | alt. 2 | 26 |

| | | |
|---|---|------------------|
| Dift. inter 15 & 16 Ceti, id est inter binas lucidiores in dorso Ceti | 4 | 22 $\frac{1}{2}$ |
| | | dubia |
| Pone pro his omnibus 4° 21' | 4 | 21 $\frac{1}{2}$ |
| | 4 | 21 |

DIE 15 DECEMBRIS.

| | | |
|----------------------------------|----|------------------|
| Alt. mer. luc. in mandibula Ceti | | |
| per Volub. | 36 | 31 $\frac{3}{8}$ |
| per Chalyb. | 36 | 32 |

| | | |
|-------------------|-----------|------------------------|
| | Longitudo | Latitudo |
| Dext. hum. Orion. | 23° 2' II | 16° 6' M. |
| Canis minoris | 20 7 ☉ | 15 56 $\frac{1}{2}$ M. |
| Canis maioris | 8 23 ☉ | 39 30 M. |

STELLÆ QUIBUS MÆSTLINUS EST VSUS IN COMETA ANNI 80².

DIE 15 FEBRUARIJ.

Per Sext. Δ.

| | | |
|---------------------|----|------------------|
| Inter 21 Ceti & 2 X | 19 | 46 |
| | 19 | 45 $\frac{1}{2}$ |

| | | |
|--------------------------------------|----|------------------|
| Inter 15 & 16 Ceti | 4 | 8 |
| | 4 | 7 |
| | 4 | 8 |
| Inter 16 Ceti & lucidam capitis Ceti | 31 | 41 |
| | 31 | 41 $\frac{1}{2}$ |

¹ Sic in codice V.² E codice V.

| | | |
|---------------------------------|--------|------------------|
| Inter 15 Ceti & lucidam | 27 | 20 $\frac{1}{2}$ |
| capitis eiusdem | 27 | 21 |
| Inter oculum γ & lucidam | | |
| capitis Ceti | ter 26 | 7 |
| Inter 21 & luc. capitis Ceti | 42 | 33 $\frac{1}{2}$ |

Declinatio.

| | | |
|---------------------------------------|----|-----------------------|
| 21 Ceti borealis in extremitate caudæ | 11 | 4 auf. |
| 22 Ceti auf. in extrem. caudæ | 20 | 10 $\frac{1}{2}$ auf. |

| | | |
|---|----|---------------------|
| 16 Ceti proximæ post caudam in dorso | 12 | 21 auf. |
| 15 Ceti sequentis a cauda in dorso | 10 | 18 |
| 2 χ in occipite duarum præcedentis | 1 | 0 |
| 5 χ in dorso sequentis | 3 | 26 |
| 8 caudæ χ | 4 | 37 |
| Lucida capitis Ceti in mandibula | 2 | 26 $\frac{1}{8}$ B. |
| Altitudo eius merid. per vet. | 36 | 31 $\frac{1}{2}$ |

OBSERUATIONES ANNI 1589.

OBSERUATIONES SOLIS.

DIE 3 JANUARIJ¹

| | |
|---------------------------|---|
| Alt. ☉ Merid. per Chalyb. | 12 42 $\frac{1}{8}$ |
| per Volub. | 12 41 |
| per Sext. | 12 42 $\frac{1}{4}$ |
| per Tychon. vtroque | 12 41 $\frac{1}{2}$ ^{vel $\frac{1}{3}$} |
| Declin. per Armillas, vno | 21 23 |
| alt. pinn. | 21 23 $\frac{1}{2}$ |
| Repetita declinatio | 21 23 $\frac{1}{6}$ |
| alt. | 21 23 $\frac{1}{2}$ |
| medium | 21 23 $\frac{1}{8}$ |

DIE 6 JANUARIJ¹.

| | |
|--|--|
| H. 6 $\frac{1}{2}$ Horologium verificabatur. | |
| H. 8 6'40" ☉ supremus limb. oriebatur | |
| 8 9 55 Medius ☉ ortus. | |
| 8 11 35 ☉ totus ortus. | |

In Meridie sequenti horologium 8 $\frac{1}{2}$ Min. iusto tardius mouebatur ab Hora 6 $\frac{1}{2}$ matutina.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 13 14 $\frac{2}{3}$ |
| per Volub. | 13 13 $\frac{1}{2}$ |
| per Sext. nou. | 13 14 $\frac{2}{3}$ |
| Declin. per vno pin. | 20 51 |
| Armill. subterr. | alt. 20 51 $\frac{1}{4}$ |

DIE 7 JANUARIJ¹.

H. 5 horologium rectificatum est ad Spicam ♄ & cor ♄ & aliquid ponderis ei iniectum est.

| | |
|---|--|
| H. 8 5'20" ☉ oriebatur ἐν πλάτει. | |
| 8 10 0 ☉ totus supra Horizontem eleuatus. | |

Eodem die in Meridie horologium mouebatur iusto tardius 5 $\frac{1}{2}$ M., qui error irrepsit ab Hora 5 matutina.

| | |
|--------------------------|--------------------------|
| Alt. ☉ Merid. per Volub. | 13 25 $\frac{2}{3}$ |
| per Sext. | 13 26 $\frac{1}{2}$ |
| per Chalyb. | 13 26 25 |
| per Mural. vtroque | 13 25 $\frac{3}{4}$ |
| Declin. per Armill. | 20 39 $\frac{1}{2}$ |
| | alt. 20 39 $\frac{1}{4}$ |

Deinde P. M. Sole versus occasum inclinato obseruabatur eius declinatio in certa altitudine vt sequitur pro refractione eruenda.

| | | |
|----------|-------------|---------------------------|
| H. 2 50' | Alt. ☉ 5 30 | Decl. 20 33 $\frac{1}{2}$ |
| 2 55 | 5 0 | 20 32 $\frac{1}{2}$ |
| 3 2 | 4 16 | 20 31 $\frac{3}{8}$ |

bona

Idque satis correspondet antecedentibus ante Meridiem habitis obseruationibus, nam mutatio est M. 3 quam etiam declinatio diurna permutata causari poterit per Horas 6.

DIE 8 JANUARIJ.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 13 38 $\frac{1}{2}$ |
| per Volub. | 13 37 |
| per Tychon. vtroque | 13 38 $\frac{1}{2}$ |
| Decl. ☉ per Armill. | 20 27 $\frac{1}{2}$ |
| | alt. 20 28 |

N. B. Horol. in Meridie correctum est.

DIE 9 JANUARIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 13 50 $\frac{1}{8}$ |
| per Volub. | 13 49 $\frac{1}{8}$ |
| per Mural. | 13 50 $\frac{1}{8}$ |
| Decl. ☉ per Armill. | 20 15 |
| | alt. 20 15 $\frac{1}{2}$ |

Non erat satis ferenum.

DIE 21 JANUARIJ.

| | |
|---------------------------|-------------------------------|
| Alt. ☉ Merid. per Chalyb. | 16 49 |
| per Sext. | 16 48 $\frac{5}{8}$ |
| per Volub. | 16 48 $\frac{1}{2}$ |
| per Mural. vtroque | 16 48 $\frac{3}{8}$ |
| Declin. ☉ | 17 16 $\frac{3}{8}$ |
| | 17 16 $\frac{3}{8}$ |
| Alt. obseruata | 16 49 0 Melior |
| Refraçtio subtrahit | 6 35 |
| Parallaxis addit | 2 53 |
| Vera Alt. | 16 45 18 |
| Declin. | 17 19 57 |
| Long. ☉ | 11 43 $\frac{1}{8}$ \approx |
| Ephemerides nostræ | 11 45 |

Forte non erat satis ferenum, vel paulatim nimium ob refractionem subductum. Sequens obseruatio certior est.

¹ Obseruationes matutinæ declinationis Solis inter obseruationes Veneris reperiuntur.

DIE 29 JANUARIJ.

Nota. Hoc die fuit apprime serenum & bonæ obseruationes per Chalyb. & Sextant.

Hoc die post diutinas obscuritates & inamœnitates restituta est apprime opportuna & clara serenitas experiendi locum Solis iuxta medias partes \approx circa eandem prorsus altitudinem in qua eum Copernicus obseruauit, cum medietatem Scorpij transiret in illa, quæ Fruenburgij est Poli altitudine, quapropter optime rectificatis omnibus instrumentis paulo ante Meridiei tempus sequentia obseruauit.

Alt. Merid. per quadrantem Maximum Chalyb. 19 12 38
per Sext. rectific. 19 12 40
per Mural. vno 19 12 20
alt. pinn. 19 12 15
per Q. Volub. 19 11 45

Declin. per Armill. maximas ter repetita, vno pinn. 14 52 $\frac{1}{2}$
alt. pinn. 14 52 $\frac{1}{3}$

Alt. æquat. 34 5 15

Declin. 14 52 30

Alt. prouenit 19 12 45

N.B. Obseruatio per Volubilem non satis bene se habet, quia Volubilis Quadrans contraxit aliquid vitij, ita vt decliuiores altitudines non satis præcise repræsentet, & obseruatio per Muralem etiam in decliuioribus non nihil deficit altitudinibus licet non adeo, idcirco potius fidendum obseruationi per Chalibeum & Sextantem habitæ, quæ bene consentiunt, quibus etiam astipulatur declinatio per Armillas obseruata, imo hæc adhuc paulo altiore requirit Alt., vtpote 5 Secundorum vel circiter, accipiens itaque veriore Altit.

19 12 40

Parallaxis in media dist. 2 50

Altitudo libera a Parallaxi 19 15 30

Refractio subtrahit 4 53

Vera Alt. a refract. &

parall. libera 19 10 37

Altitudo æquatoris 34 5 15

Vera Solis declin. 14 54 38

Huic respondet e tabula decl.

Long. \approx 19 51 38

Tabulæ nostræ neotericæ dant locum Solis in 19 51 40 \approx quod pene idem est.

DIE 30 JANUARIJ.

Alt. \odot Merid. per Chalyb. 19 31 40

per Sext. 19 32 15

per Mural. 19 31 20

per Volub. 19 30 30

Declin. per Armillas maximas

vtroque pin. 14 33 $\frac{1}{2}$

Repetita eadem 14 33 $\frac{1}{2}$

altero pin. 14 33 $\frac{1}{2}$

Declinatio repræsentat Altitudinem P. 19 M. 32 præcise, sed fide potius Altitudini per Chalyb. acceptæ, eamque a parallaxi & refractione libera, vt cognoscatur vera Altitudo & declinatio in hunc modum.

Altitudo obseruata 19 31 40

Refractio subtrahit 4 45

Altit. citra refract. 19 26 55

Parallaxis addit 2 50

Alt. absq. refr. & par. 19 29 45

Eleuatio Æquatoris 34 5 15

Vera declinatio 14 35 30

Respondet 20 51 $\frac{1}{2}$ \approx

Ephemerides dant 20 52 $\frac{1}{2}$

Patet itaque potius sumendam altitudinem quæ per Sextantem obseruabatur in hunc modum.

Altitudo per Sextantem 19 32 15

4 45

Alt. libera a refract. 19 27 30

Parallaxis addit 2 50

Alt. vera 19 30 20

Alt. æquat. 34 5 15

Vera declinatio 14 34 55

Resp. Longitudo in 20 53 $\frac{1}{2}$ \approx

Hoc abundat aliquantulum quemadmodum alterum deficiebat, patet itaque limitato vtroque locum \odot satis recte se habere.

DIE 31 JANUARIJ.

In Meridie horologium satis bene se habuit, nam saltem lesquialtero minuto tardius ibat.

Non quidem erat satis serenum, sed rariusculi vapores Solem obtegebant, nihilominus hæc, qua fieri potuit diligentia obseruata sunt.

Alt. ☉ Mer. per. Chal. max. 19 50 $\frac{1}{2}$
 per Sextant. 19 51 $\frac{1}{4}$
 per Volub. 19 50 $\frac{1}{2}$
 per Mural., vtroq. pin. 19 51 $\frac{1}{2}$

Decl. per Armill. 14 14
 alt. pinn. 14 14 $\frac{1}{2}$

Si itaque limitando omnia acceperimus altitudinem obseruatam fuisse præcise 19 51 0

Aufert Refractio 4 25

Absque refractione 19 46 35

Parallaxis addit 2 50

Vera altitudo 19 49 25

Alt. æquat. 34 5 15

Vera declinatio 14 15 50

Resp. 21 53 \approx fere
 quod satis exacte consentit cum nostro neoterico calculo.

DIE 6 FEBRUARIJ.

Fuit satis bene serenum & obseruabatur ☉ hoc modo.

Alt. ☉ Merid. per Chalyb. 21 52 40
 per Sext. 21 52 30
 per Volub. 21 52 30
 per Mural., vet. 21 51 50
 nouo 21 52 10

Declin. per Armill. vno 12 12 45
 alt. 12 12 50

Alt. obseru. 21 52 35 aliter 21 52 30

Refr. 3 35 3 40

Parall. 2 50 2 50

Vera alt. 21 51 50 21 51 40

Vera decl. 12 13 25 12 13 35

Resp. 27 57 $\frac{1}{2}$ \approx 27 57 \approx

Calc. nost. 27 56 $\frac{1}{2}$, reliquum est pene insensibile. Patet autem hinc refractionem quæ e Tabella nostra adhibetur non esse nimiam sed potius aliquantulum deficere. Potest tamen

fieri quod aër, etfi serenus, minus tamen purus hoc tempore fuerit.

DIE 9 FEBRUARIJ.

H. 11 52 A. M. Decl. ☉

vno pin. 11 10 $\frac{1}{6}$

altero 11 10 $\frac{1}{4}$

Alt. Merid. per Chalyb. 22 55 $\frac{3}{8}$

per Sext. 22 55 $\frac{5}{8}$

per Mural. vno 22 55 $\frac{1}{8}$

alt. 22 55

per Volub. 22 54 $\frac{3}{8}$

Pone hic alt. limitatam 22 55 $\frac{1}{2}$

Declinatio paulo post Meridiem

repetita vno 11 10 0

alt. 11 9 50

34 5 15

12 55 25

Alt. obseru. per Chalyb. 22 55 40

Refractio aufert 3 10

22 52 30

Parallaxis addit 2 48

22 55 18

Declinatio 11 9 57

Resp. 0 58 30)

Ergo¹ die antecedente 29 58 $\frac{1}{8}$

Maxima 22 55 50

Minima 22 54 40

1 10

Dimid. 35

22 54 40

22 55 15

Altitudo correcta 22 55 0

34 5 30

11 10 30

Resp. 0 57 0)

Die 8 29 56 40

Nota. Erant tenuissimi vapores ante Solem, ideoque refractione poterit paululum plus subtrahere.

Si acceperimus Altitudinem ☉ P. 22 M. 55 $\frac{1}{8}$ vt præbuit Muralis, omnia satis bene conuenient.

Sed nihil certi hinc concludi poterit, non enim erat satis serenum & purum, sed saltem mediocre.

¹ E codice V.

DIE 10 FEBRUARIJ.

Fuit apprimè serenum & purum nullis apparentibus vaporibus. Altit. ☉ Merid. varijs instrumentis observabatur hoc modo.

| | |
|-------------------|-------------------|
| Per Chalyb. max. | 23 17 25 |
| per Sext. vnum | 23 17 20 |
| per Sext. alterum | 23 17 10 |
| per Q. Volub. | 23 16 40 |
| per Muralem, | vno 23 16 40 |
| | alt. pin. 23 17 0 |

Declin. ☉ vno 10 48 $\frac{1}{2}$
alt. 10 48 $\frac{1}{2}$

Repetita idem dabat. 34 5 15
10 48 20
23 16 55

| | | |
|-----------------|----------------------|--------------------|
| | Per Chalyb. | Per Mural. |
| Alt. observata | 23 17 25 | 23 17 0 |
| Refr. subtr. | 3 5 | 3 5 |
| | 23 14 20 | 23 13 55 |
| Parall. addenda | 2 47 | 2 47 |
| Vera altit. | 23 17 7 | 23 16 42 |
| Alt. æquat. | 34 5 15 | 34 5 15 |
| Vera decl. | 10 48 8 | 10 48 33 |
| Resp. | 1 59 $\frac{3}{4}$) | 1 58 $\frac{1}{2}$ |

quod satis convenit
Noster calculus 1 58

Eodem die post Meridiem.
Sequentia pro refractione ☉

| H. M. | Alt. ☉ | Azim. ☉ | Declin. ☉ |
|--------------------|--------------------|---------|---|
| | | | vno alt. |
| 4 26 | 5 0 | 62 46 | 10 39 10 39 $\frac{1}{2}$ |
| 4 30 | 4 23 $\frac{2}{3}$ | 63 45 | 10 38 $\frac{1}{2}$ 10 38 $\frac{1}{4}$ |
| 4 36 | 3 41 $\frac{3}{4}$ | 64 59 | 10 37 10 36 $\frac{1}{2}$ |
| 4 39 $\frac{1}{2}$ | 3 18 $\frac{1}{2}$ | 65 41 | 10 35 $\frac{3}{4}$ 10 35 $\frac{1}{2}$ |
| 4 43 $\frac{1}{2}$ | 2 48 | 66 34 | 10 34 $\frac{1}{2}$ vno |
| 4 46 $\frac{1}{2}$ | 2 26 $\frac{1}{2}$ | 67 8 | 10 33 $\frac{1}{2}$ faltem |
| 4 49 $\frac{1}{3}$ | 2 7 $\frac{1}{4}$ | 67 45 | 10 32 $\frac{1}{2}$ |
| 4 51 $\frac{2}{3}$ | 1 49 $\frac{1}{4}$ | 68 15 | 10 30 $\frac{3}{4}$ |
| 4 54 $\frac{1}{2}$ | 1 30 | 68 47 | 10 29 $\frac{1}{4}$ |

☉ visusest occidere H. 5 M. 5 proxime.

Nota. Hora 7 12 $\frac{1}{2}$ (verificata H. 7 5') vltimum crepusculi momentum visum est in occasu iuxta Horologium, erat tunc sinistèr humerus Orionis versus occasum vltra Meridianum P. 3 $\frac{1}{2}$.

¹ Cf. Epist. p. 139 (T. VI p. 169).

Nota. Quando prima balthæi transiit Merid. (Resp. H. 7 M. 0 $\frac{1}{4}$) adhuc aliquantulum de crepusculo videbatur; fuit itaque crepusculum die eodem H. 7 M. 0. Occidit autem ☉ eodem die H. 4 M. 56, quapropter crepusculum fiebat ab occasu Solis Horis 2 M. 4, quæ efficiunt in gradibus æquatoris 31, qui est arcus crepusculi vespertini iuxta initia). Nonij ratio habet proxime 29 partes, quod non multum differt, estque insensibile. Sed quando media balthæi vix discerni poterat an huius est nec ne, putabatur tamen adhuc aliquid restare, sed erat insensibile. Quando prima balthæi adhuc sensibilibiter, restabat aliquid, sed cum vltima balthæi transiret, prorsus nihil restabat. Vtere igitur potius media balthæi, vel limita cum observatione stellæ in sinistro humero, accipiendo medium inter vtrumque tempus, ut fias certior. Erat satis serenum & melius videri non potuit.

Nota¹. Posito loco Solis in 2 15) (& Asc. R. humeri Orionis sinistri 75 48, fuit Asc. R. M. C. 79 18, ergo ☉ infra Horizontem in verticali P. 17 13 in globo. Si mediam balthæi abumperis quod rectius erit in Mer. cum sua Asc. R. 78 52, Resp. arcus crepusculi 16 59, quod est rectius.

DIE 11 FEBRUARIJ.

Horologium 23 min. in Meridie celerius ibat.

Alt. ☉ Merid.

| | |
|-------------------|----------------------|
| per Chalyb. | 23 38 35 |
| per Sext. vet. | 23 38 50 dubia |
| per Sext. nou. | 23 38 30 |
| per Volub. | 23 38 20 |
| per Muralem, nouo | 23 38 30 |
| | veteri 23 38 0 dubia |

Declin. per Armill. 10 26 45

alt. 10 26 45

34 5 15

23 38 30

Satis itaque consentiunt omnes observationes & ipsa etiam declinatio per Armillas fuisse Solis altitudinem meridianam 23 38 $\frac{1}{2}$, quare hac tanquam certa vtemur.

Altitudo observata 23 38 30
Refractio subtrahit 3 0

Parallaxis addit 23 35 30 2 46

Altit. æquatoris 23 38 16 34 5 15

Respondet 10 27 0 2 58 $\frac{1}{2}$ X

Ephemerides nostræ dant 2 58 $\frac{1}{4}$

fere, quod satis conuenit.

Observatio diluculi¹.

N. B. Die 12 Februarij mane observabatur diligenter diluculum matutinum hoc modo.

Quando Spica ♀ abfuit a Merid. versus occasum P. 35 M. 20 prima aurora apparuit, nam quando eadem stella distabat P. 36 M. 15 fuit aurora satis manifesta.

Examinaui hæc per globum & posita Asc. R. Spicæ ♀ P. 195 M. 55 additis 35 $\frac{1}{2}$, fuit in Meridiano quando diluculum incepit 231 $\frac{1}{2}$ & in ortu 321 15. Hinc posito loco Solis in P. 3 M. 40 X collegi in globo diligenter Solem fuisse infra Horizontem in arcu verticali P. 16 $\frac{1}{2}$ bis experiendo.

DIE 12 FEBRUARIJ.

Erat apprime serenum & hæc observabantur.

Alt ☉ Merid.

per Chalyb. 24 0 40

per Sext. I 24 0 50

per Sext. alt. 24 0 50

per Q. Volub. 23 59 $\frac{3}{4}$

per Q. Port. min. 24 0 $\frac{3}{4}$

per Muralem, nouo 23 59 $\frac{5}{8}$

veteri 24 0 $\frac{1}{4}$

Declin. observata

H. 12 M. 7, vno 10 5

alt. 10 5 $\frac{1}{2}$

Horologium hoc die 23 minutis iusto tardius ibat, nam nimium heri eximebatur.

Alt. per Chalyb. 24 0 40

Refractio 2 50

23 57 50

Parallaxis 2 45

24 0 35

Alt. æquat. 34 5 15

Declin. 10 4 40

Resp. 4 0' X, Ephem. habent 3 58 $\frac{1}{2}$, diff. 1 $\frac{1}{2}$ minuti. Si acceperis altitudinem 24 0 15, resp. 3 58 $\frac{1}{4}$ X, quod satis consentit.

Eodem die P. M. pro refractione ☉ observatus est.

| H. M. | Azim. ☉ | Alt. ☉ | Declin. ☉ |
|-------|---------|--------|--------------------|
| 4 39 | 64 55 | 4 33 | 9 55 $\frac{1}{2}$ |
| 4 43 | 65 50 | 3 58 | 9 54 $\frac{3}{4}$ |
| 4 45 | 66 24 | 3 37 | 9 54 |
| 4 48 | 67 10 | 3 14 | 9 52 |
| 4 52 | 68 11 | 2 38 | 9 50 $\frac{1}{2}$ |
| 4 56 | 68 52 | 2 14 | 9 49 |
| 4 59 | 69 20 | 1 55 | 9 47 $\frac{1}{2}$ |
| 5 2 | 70 6 | 1 34 | 9 45 $\frac{1}{2}$ |
| 5 4 | 70 38 | 1 19 | 9 43 $\frac{1}{2}$ |

¹ Cf. Epist. p. 140 (T. VI p. 169).

Æquatore p. 171 13. Et posito loco Solis in 4½) fuit arcus crepusculi vespertini tunc e globo p. 16 M. 37, sed quando abfuit a Meridiano 1½ colligitur arcus idem 16 50'.

DIE 13 FEBRUARIJ, MANE.

H. 5 M. 0½ cum Spica distaret a Merid. versus occ. 27 28½, videbatur per æstimationem nonnihil magis clarescere in oriente quam in occidente, sed non potuit satis animadverti propter nubes.

H. 5 6½ Spica occid. 28 48 aurora videbatur exoriri

| | |
|-------|--------|
| 5 10½ | 29 48 |
| 5 18½ | 31 41½ |

Tunc aurora satis erat manifesta.

Sed hæc considerationes non sunt satis certæ propter nubes in ortu densas.

DIE 15 FEBRUARIJ.

| | |
|-------------------------|-------|
| Alt. ☉ Merid. per Sext. | 25 7 |
| per Chalyb. | 25 7 |
| per Volub. | 25 6½ |
| per Mural., nouo | 25 6¾ |
| veteri | 25 6⅔ |

Declin. ☉ 8 59

Horologium mouebatur 0½' iusto tardius.

| | |
|---------------------------------|----------|
| Altit. ☉ obseruata | 25 6 45 |
| Refractio sublt. | 2 31 |
| Parallaxis add. | 2 42 |
| Alt. ☉ vera | 25 6 56 |
| Alt. æquatoris | 34 5 15 |
| Decl. ☉ vera | 8 58 19 |
| Resp. ex tab. decl. | 7 0 3) |
| Locus ☉ ex Tab. nost. | 6 59 48) |
| Ephemerides nostræ veteres dant | 6 58 55) |

DIE 15 FEBRUARIJ, VESPERI.

Horologium hodie ad Solis meridianam altitudinem rectificatum.

H. 7 M. 15½ Quando lucidus humerus Orionis distabat a merid. ad occas. in Æquatore 0° 49½' videbatur nullum fuisse crepusculum.

H. 7 16½ Lucidus hum. Orionis ad occasum 1° 7'. Crepusculum non apparuit.

H. 7 17½ Cum lucid. hum. Orion. abesset a Merid. ad occasum 1° 23', nullum omnino crepusculum animadverti poterat.

DIE 28 FEBRUARIJ.

| | |
|---------------------------|---------|
| Alt. ☉ Merid. per Chalyb. | 30 4 50 |
| per Volub. | 30 5 0 |
| per Sext. trig. | 30 5 0 |
| per Mural., veteri | 30 5 10 |
| nouo | 30 5 15 |

Decl. ☉ per Armillas, vno 4 0
alt. 4 0½

N. B. Erat bene serenum.

| | |
|----------------|---------|
| Alt. obseruata | 30 5 0 |
| Refractio | 1 25 |
| Parallaxis | 2 37 |
| Vera Altit. | 30 6 12 |
| Decl. ☉ vera | 3 59 3 |
| Locus ☉ | 19 58½) |

Ephemeris noster 19 58½ præcise habet, quare constat omnia recte se habere.

DIE 1 MARTIJ.

| | |
|---------------------------|----------|
| Alt. ☉ Merid. per Chalyb. | 30 28 |
| per Sext. | 30 28½ |
| per Volub. | 30 27½ |
| per Mural. | 30 28 |
| Declin. per Armill. | vno 3 37 |
| alt. | 3 36¾ |

Non erat satis serenum.

DIE 7 MARTIJ.

| | |
|---------------------------|-----------|
| Alt. ☉ Merid. per Chalyb. | 32 49½ |
| per Sext. | 32 50 |
| per Volub. | 32 50½ |
| per Tychon. | vno 32 50 |
| alt. | 32 49½ |

Declin. per Armill. vno 1 15½
Non erat satis serenum.

H. 7 59½ Vesper. Cum Canis minor distaret a mer. versus occ. 9° 37', non videbatur crepusculum superesse.

H. 8 $1\frac{1}{2}$ Nihil de Crepusculo amplius visum est. Distabat tunc Canis minor ad occ. a Merid. $10^{\circ} 15'$.

DIE 10 MARTIJ.

Hora $12\frac{1}{4}$ fuit Declin. $\odot 0^{\circ} 3\frac{1}{2}'$ Mer. vtroque pinn. Horologium verificabatur hodie post meridiem ad \odot ex æquatore.

Eodem die vesperi.

H. 7 $57'$ Cum distabat Canis min. a mer. $11^{\circ} 57\frac{1}{2}'$, non poterat cerni amplius Crepusculum.

H. 8 $0\frac{1}{6}'$ Cum distabat Canis min. a Mer. occ. $12^{\circ} 36'$, nullum omnino videbatur Crepusculi vestigium superesse.

DIE 11 MARTIJ.

| | |
|---------------------------------|-----------------|
| Alt. \odot Merid. per Chalyb. | 34 24 50 |
| per Volub. | 34 25 |
| per Sextant. | 34 24 55 |
| per Mural., | veteri 34 24 55 |
| | nouo 34 25 0 |

Declin. \odot borea 0 $19\frac{3}{4}$
alt. pinn. 0 $19\frac{1}{2}$

Erat bene serenum & tranquillum.

Horol. in Meridie $10'$ iusto tardius mouebatur a Meridie fere proxime antecedenti.

DIE 12 MARTIJ.

Mane H. 4 $0\frac{1}{2}'$ videbatur illucescere, affuit tunc lucida Vulturis a meridiano versus ortum in grad. Æquatoris $51^{\circ} 5'$. Sed hæc obseruatio auroræ est incerta propter nebulas.

| | |
|---------------------------------|--------------------|
| Alt. \odot Merid. per Chalyb. | 34 48 25 |
| per Sext. | 34 48 20 |
| per Volub. | 34 $48\frac{1}{2}$ |
| per Mural. | 34 48 35 |
| | 34 48 50 |

Declin. \odot vno 0 $43\frac{1}{2}$

Erat bene serenum.

Horol. mouebatur in hoc meridie iusto celerius $2' 55''$.

DIE 13 MARTIJ, VESPERI.

H. 8 $1\frac{1}{2}'$ Canis min. a Meridiano ad occ. dist. 15 28. Tunc temporis non amplius apparebat crepusculum.

8 $2\frac{3}{8}$ Can. min. ad occasum 15 48. Tum nullum omnino visibile erat crepusculum.

DIE 14 MARTIJ, MANE.

H. 3 $25'$ Spica occ. 40 30. Tunc incepit diescere.

3 $26\frac{1}{2}$ Spica occ. 40 50. Erat aurora manifesta.

DIE 15 MARTIJ, VESPERI.

H. 8 $15\frac{1}{2}'$ Canis minor occ. 17 52 Crepusculum non apparuit.

8 $16\frac{1}{2}$ Canis min. occ. 18 14. Nullum omnino crepusculi vestigium apparebat.

DIE 16 MARTIJ.

| | |
|---------------------------------|--------------------|
| Alt. \odot Merid. per Tychon. | 36 23 |
| per Chalyb. | 36 $22\frac{1}{2}$ |
| per Q. min. Azim. | 36 22 |
| per Volub. | 36 22 |
| Declin. Bor. | vtroque 2 18 |

DIE 18 MARTIJ.

| | |
|---------------------------------|-----------------------|
| Alt. \odot Merid. per Q. Min. | 37 $9\frac{3}{4}$ |
| per Chalyb. | 37 $9\frac{1}{2}$ |
| per Volub. | 37 $9\frac{1}{4}$ |
| per Mural. | 37 $9\frac{1}{2}$ |
| | alt. 37 10 |
| Declin. \odot per Armill. | 3 5 |
| | alt. 3 $4\frac{3}{4}$ |

DIE 23 MARTIJ.

| | |
|---------------------------------|-----------------------|
| Alt. \odot Merid. per Chalyb. | 39 5 40 |
| per Volub. | 39 5 20 |
| per Mural. | 39 5 |
| | nouo 39 5 20 |
| Declin. \odot | 5 $0\frac{1}{4}$ |
| | alt. 5 $0\frac{1}{2}$ |

Horologium rectificabatur.

DIE 25 MARTIJ.

| | |
|---------------------------------|------------------------------|
| Alt. \odot Merid. per Chalyb. | 39 51 |
| per Volub. | 39 $50\frac{5}{8}$ |
| per Mural. | 39 51 |
| Declin. \odot per Armill. | 5 $46\frac{1}{3}$ |
| | alt. pinn. 5 $46\frac{1}{2}$ |

Non erat satis serenum.

DIE 27 MARTIJ.

| | | | |
|---------------------------|------|----|------------------|
| Alt. ☉ Merid. per Mural., | nouo | 40 | 36 $\frac{1}{2}$ |
| | vet. | 40 | 36 $\frac{1}{6}$ |
| per Chalyb. | | 40 | 36 $\frac{1}{2}$ |
| per Volub. | | 40 | 36 $\frac{1}{4}$ |
| Declin. ☉ | | 6 | 31 |
| | alt. | 6 | 30 $\frac{5}{8}$ |

Horologium rectificabatur.

Erat bene serenum.

Vesper, H. 8 56', Cor ♀ occ. 3° 0'.

Tunc temporis non amplius apparebat crepusculum vespertinum.

DIE 28 MARTIJ.

| | | | |
|--------------------------|-----------|----|------------------|
| Alt. ☉ Merid. per Volub. | | 40 | 59 $\frac{1}{6}$ |
| per Chalyb. | | 40 | 59 |
| per Sext. Δ | | 40 | 59 $\frac{1}{3}$ |
| per Muralem, | nouo | 40 | 59 $\frac{1}{6}$ |
| | vet. | 40 | 58 $\frac{3}{4}$ |
| per Q. minim. | | 40 | 59 $\frac{1}{2}$ |
| Declin. ☉ Bor. | vno | 6 | 54 |
| | alt. pin. | 6 | 54 $\frac{1}{3}$ |

Erat bene serenum.

DIE 29 MARTIJ.

| | | | |
|---------------------------|-----------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 41 | 20 $\frac{5}{6}$ |
| per Volub. | | 41 | 21 |
| per Q. Minim. | | 41 | 20 |
| per Mural., | vet. | 41 | 21 |
| | nouo pin. | 41 | 21 $\frac{1}{2}$ |
| Declin. ☉ | vno | 7 | 15 $\frac{1}{2}$ |
| | alt. pin. | 7 | 16 |

Horologium in Meridie 21 $\frac{1}{2}$ M. iusto citius mouebatur a meridie proxime antecedente.

DIE 1 APRILIS.

Horologium in Meridie sequenti 14' iusto tardius mouebatur.

| | | | |
|--------------------------|------|----|------------------|
| Alt. ☉ Merid. per Volub. | | 42 | 27 $\frac{5}{6}$ |
| per Chalyb. | | 42 | 27 $\frac{2}{3}$ |
| per Mural., | nouo | 42 | 28 $\frac{1}{4}$ |
| | vet. | 42 | 27 $\frac{5}{6}$ |
| Declin. ☉ per Armill. | | 8 | 22 $\frac{5}{6}$ |
| | alt. | 8 | 23 $\frac{1}{4}$ |

DIE 5 APRILIS.

Horologium correctum.

| | | | |
|--------------------------|------|----|------------------|
| Alt. ☉ Merid. per Volub. | | 43 | 55 |
| per Chalyb. | | 43 | 54 $\frac{1}{3}$ |
| per Mural., | vet. | 43 | 55 |
| | nouo | 43 | 55 $\frac{1}{8}$ |
| Declin. ☉ | | 9 | 49 $\frac{1}{3}$ |
| | alt. | 9 | 49 $\frac{2}{3}$ |

DIE 11 APRILIS.

| | | | |
|---------------------------|------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 45 | 59 $\frac{5}{6}$ |
| per Volub. | | 46 | 0 |
| per Mural. | | 46 | 0 $\frac{1}{2}$ |
| | nouo | 46 | 0 25 |
| Declin. ☉ | | 11 | 55 |
| | alt. | 11 | 54 $\frac{1}{2}$ |

DIE 12 APRILIS.

| | | | |
|---------------------------|------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 46 | 20 |
| per Volub. | | 46 | 20 $\frac{1}{6}$ |
| per Mural. | | 46 | 20 $\frac{2}{3}$ |
| | nouo | 46 | 20 $\frac{5}{6}$ |
| Declin. ☉ | | 12 | 15 |
| | alt. | 12 | 14 $\frac{1}{2}$ |

DIE 14 APRILIS.

| | | | |
|---------------------------|------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 47 | 0 $\frac{1}{4}$ |
| per Volub. | | 47 | 0 |
| per Mural. | | 47 | 0 $\frac{1}{4}$ |
| | nouo | 47 | 1 |
| Declin. ☉ | | 12 | 55 |
| | | 12 | 54 $\frac{1}{2}$ |

Non erat satis serenum.

DIE 16 APRILIS.

| | | | |
|---------------------------|------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 47 | 39 $\frac{1}{3}$ |
| per Volub. | | 47 | 39 $\frac{1}{4}$ |
| per Mural., | vet. | 47 | 39 $\frac{1}{6}$ |
| | nouo | 47 | 39 $\frac{3}{4}$ |
| Declin. B. | | 13 | 33 $\frac{1}{2}$ |
| | alt. | 13 | 33 $\frac{3}{4}$ |

Erat satis serenum.

Horol. 6 Mtis tardius iusto mouebatur

DIE 18 APRILIS.

| | | | |
|-------------------------------|------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | | 48 | 17 $\frac{1}{3}$ |
| per Volub. | | 48 | 17 $\frac{1}{4}$ |
| per Mural., | vet. | 48 | 17 $\frac{1}{6}$ |
| | nouo | 48 | 17 $\frac{5}{6}$ |
| Declin. ☉ 14 12 vtroque pinn. | | | |

DIE 22 APRILIS.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 49 | 30 $\frac{1}{6}$ |
| per Volub. | | 49 30 |
| per Mural., | vet. | 49 30 $\frac{1}{2}$ |
| | nouo | 49 31 |
| Decl. ☉ per Armill. | vno | 15 25 $\frac{1}{3}$ |
| | alt. | 15 25 |

DIE 24 APRILIS.

| | | | |
|---------------------------|------|----|-----------------|
| Alt. ☉ Merid. per Chalyb. | 50 | 6 | 5 |
| per Volub. | | 50 | 6 |
| per nouum Isl. Q. | | 50 | 7 |
| per Mural. | vet. | 50 | 6 $\frac{1}{4}$ |
| | nouo | 50 | 6 $\frac{5}{6}$ |
| Decl. ☉ per Armill. | vno | 16 | 0 |
| | alt. | 16 | 0 $\frac{1}{4}$ |

Horologium mouebatur 6 $\frac{1}{2}$ tardius.
Rectificatum.

DIE 26 APRILIS.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 50 | 40 $\frac{1}{4}$ |
| per Volub. | | 50 40 $\frac{1}{2}$ |
| per nouum Islandic. | | 50 41 |
| per Mural., | vet. | 50 40 $\frac{1}{6}$ |
| | nouo | 50 40 $\frac{1}{3}$ |
| Decl. per Armill. | vno | 16 34 |
| | alt. | 16 35 |

Horologium ibat 7 $\frac{1}{3}$ M. iusto tardius,
qui error corrigebatur.

DIE 6 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 53 | 13 $\frac{1}{3}$ |
| per Volub. | | 53 14 |
| per Mural., | vet. | 53 14 |
| | nouo | 53 14 $\frac{1}{6}$ |
| Decl. ☉ per Armill., | vno | 19 8 $\frac{3}{4}$ |
| | alt. | 19 9 $\frac{1}{2}$ |

DIE 7 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 53 | 26 $\frac{5}{6}$ |
| per Volub. | | 53 28 |
| per Mural., | vet. | 53 28 |
| | nouo | 53 27 45 |
| Decl. ☉ per Armill., | vno | 19 22 $\frac{1}{2}$ |
| | alt. | 19 23 |

Horologium corrigebatur.

DIE 10 MAIJ.

| | | |
|---------------------------|----|--------------------|
| Alt. ☉ Merid. per Chalyb. | 54 | 6 $\frac{1}{3}$ |
| per Volub. | | 54 7 $\frac{2}{3}$ |

| | | | |
|----------------------|------|----|-----------------|
| per Mural., | vet. | 54 | 6 $\frac{2}{3}$ |
| | nouo | 54 | 7 fere |
| Decl. ☉ per Armill., | vno | 20 | 1 |
| | alt. | 20 | 1 $\frac{1}{2}$ |

Corrigebatur Horologium.

DIE 17 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 55 | 26 $\frac{1}{6}$ |
| per Volub. | | 55 26 $\frac{1}{3}$ |
| per Mural., | vet. | 55 25 $\frac{2}{3}$ |
| | nouo | 55 26 $\frac{1}{6}$ |
| Decl. ☉ per Armill. | vno | 21 21 |
| | alt. | 21 21 |

DIE 20 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 55 | 54 $\frac{1}{3}$ |
| per Volub. | | 55 54 $\frac{1}{2}$ |
| per Mural., | vet. | 55 54 $\frac{1}{3}$ |
| | nouo | 55 54 $\frac{5}{6}$ |
| Decl. ☉ per Armill., | vno | 21 50 $\frac{2}{3}$ |
| | alt. | 21 50 |

Erat satis ferenum.

DIE 21 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 56 | 3 $\frac{1}{6}$ |
| per Volub. | | 56 3 |
| Decl. per Armill. | vno | 21 59 |
| | alt. | 21 59 $\frac{1}{4}$ |

DIE 23 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 56 | 19 $\frac{1}{3}$ |
| per Volub. | | 56 19 |
| per Mural. | vet. | 56 19 $\frac{1}{3}$ |
| | nouo | 56 19 $\frac{2}{3}$ |
| Decl. per Armill. | vno | 22 15 |
| | alt. | 22 14 $\frac{5}{6}$ |

DIE 24 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 56 | 27 $\frac{1}{6}$ |
| per Volub. | | 56 26 $\frac{1}{2}$ |
| per Mural., | vet. | 56 27 |
| | nouo | 56 27 $\frac{2}{3}$ |
| Decl. per Armill. | vno | 22 21 $\frac{1}{2}$ |
| | alt. | 22 22 |

Erat mediocriter ferenum.

DIE 25 MAIJ.

| | | |
|---------------------------|------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 56 | 34 $\frac{2}{3}$ |
| per Volub. | | 56 34 $\frac{3}{4}$ |
| per Mural., | vet. | 56 34 |
| | nouo | 56 34 $\frac{1}{3}$ |
| Decl. per Armill. | vno | 22 30 |
| | alt. | 22 29 $\frac{3}{4}$ |

DIE 26 MAIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 56 40 $\frac{3}{4}$ |
| per Volub. | 56 41 $\frac{1}{2}$ |
| per Mural, | vet. 56 41 |
| | nouo 56 41 $\frac{1}{4}$ |
| Decl. per Armill. | vno 22 35 $\frac{1}{2}$ |
| | alt. 22 35 $\frac{3}{8}$ |

Erat satis ferenum.

DIE 28 MAIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 56 53 $\frac{1}{2}$ |
| per Volub. | 56 54 |
| per Mural, | vet. 56 53 $\frac{3}{4}$ |
| | nouo 56 54 |

Horologium corrigebatur. Erat satis ferenum. Declinatio per Armillas non poterat accipi propter suprapositas trabes, ex quibus nouum tectum erat exstruendum.

DIE 2 JUNIJ.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 57 18 |
| per Volub. | 57 18 $\frac{1}{4}$ |
| per Mural., | vet. 57 18 |
| | nouo 57 18 |

Declin. per Armill. non poterat accipi.

DIE 11 JUNIJ¹.

| | |
|--------------------|-----------------|
| Alt. ☉ Merid. | |
| per Chalyb. maior. | 57 35 30 |
| | vel 25 |
| per Volubilem | 57 35 45 |
| per Tychon. | 57 35 45 |
| | altero 57 35 50 |

Decl. ☉ per Arm. 23 29 50
subterr. mai. alt. pin. 23 29 45
Erat satis ferenum. Horolog. corrigebatur.

Eodem die 11 Junij, P. M.

Prorefractione declinationis ☉ in Solstitio æstiuo obseruabantur sequentia.

| Declin. ☉ per Armillas maiores | Altit. ☉ per Volub. | Azim. ☉ a Mer. ad occ. |
|-----------------------------------|------------------------|---------------------------|
| vno alt. pin. | | |
| 23 29 $\frac{3}{4}$ | 23 29 $\frac{5}{8}$ | 35 2 $\frac{1}{2}$ |
| 23 29 $\frac{3}{4}$ | 23 29 $\frac{5}{8}$ | 33 22 $\frac{1}{2}$ |
| 23 29 $\frac{3}{4}$ | 23 29 $\frac{5}{8}$ | 30 13 $\frac{3}{4}$ |
| 23 29 $\frac{5}{8}$ | 23 29 $\frac{3}{4}$ | 29 13 |
| 23 29 $\frac{3}{4}$ vtroq. | 27 10 $\frac{1}{2}$ | 92 37 |

¹ Hinc vsque ad finem anni e codice V.

| | | |
|---------------------|---------------------|---|
| 23 29 $\frac{1}{4}$ | 23 29 $\frac{5}{8}$ | 20 $\frac{5}{8}$ per vtrumq. min. Q. |
| 23 30 | 23 30 $\frac{1}{3}$ | 18 $\frac{3}{4}$ per Q. min. |
| 23 30 $\frac{1}{2}$ | 23 30 | 17 10 per Q. max. |

| | | Per Chalyb. | Chalyb. |
|---------------------|---------------------|---------------------|------------|
| 23 30 $\frac{1}{4}$ | 23 30 $\frac{5}{8}$ | 15 54 | |
| 23 30 $\frac{3}{8}$ | 23 30 $\frac{1}{3}$ | 13 44 $\frac{1}{2}$ | |
| 23 32 $\frac{1}{4}$ | 23 31 $\frac{5}{8}$ | 10 15 | |
| 23 32 $\frac{3}{8}$ | 23 31 $\frac{5}{8}$ | 9 47 | |
| 23 33 | 23 32 $\frac{3}{8}$ | 7 45 | |
| 23 33 $\frac{3}{8}$ | 23 34 | 7 | |
| 23 34 $\frac{1}{4}$ | 23 34 | 6 $\frac{1}{2}$ | |
| 23 34 $\frac{3}{8}$ | 23 34 | 6 $\frac{1}{4}$ | |
| 23 34 30" | 23 34 45" | 5 30 | |
| 23 35 $\frac{3}{8}$ | 23 36 $\frac{1}{4}$ | 4 50 | |
| 23 36 $\frac{1}{2}$ | 23 35 $\frac{3}{4}$ | 4 5 | Erattunc ☉ |

splendor propter nubeculas circa Horizont. existentes obscurior.

| | | |
|---------------------|----------------------------------|-----------------------------------|
| 23 37 $\frac{3}{8}$ | 23 38 | 3 40 |
| 23 38 | 23 38 $\frac{1}{2}$ | 3 10 |
| 23 40 | 23 39 $\frac{3}{4}$ | 2 45 |
| 23 40 $\frac{1}{2}$ | 23 40 $\frac{1}{8}$ | 2 20 |
| 23 41 $\frac{1}{2}$ | 23 42 | 1 $\frac{5}{8}$ per æstimationem. |
| 23 42 $\frac{5}{8}$ | vnico saltem pinnac. | 1 $\frac{1}{2}$ per æstimationem. |
| 23 44 | Tunc ☉ propter Obseruatorij | |
| | Horizontem non amplius poterat | |
| | obseruari, erat enim decliuus, & | |
| | non vltra mediam sui partem su- | |
| | pra Horizontem hemisphærij ele- | |
| | uatus. | |

N. B. Erat circa Horizontem medio-
cris vaporum craßities.

DIE 12 JUNIJ, MANE.

| Declinatio ☉ | Altit. ☉ | Azim. ☉ ab ortu in Mer. numerand. |
|---------------------|---------------------|---|
| 23 40 $\frac{1}{2}$ | 23 40 $\frac{5}{8}$ | 2 43 $\frac{1}{2}$ |
| 23 40 $\frac{1}{2}$ | | 3 17 $\frac{5}{8}$ |

altero non poterat accipi.

| | | | |
|-------|---------------------|------|--------|
| 23 37 | 23 36 $\frac{1}{2}$ | 4 42 | 126 25 |
| 23 35 | 23 35 $\frac{1}{8}$ | 5 4 | 125 50 |

Hic lignum interpositum, quod amo-
ueri non poterat, impedimento erat.

| | | | |
|---------------------|---------------------|--------------------|--------|
| 23 34 $\frac{5}{8}$ | 23 35 | 5 25 | 125 15 |
| 23 34 vtroq. | | 6 54 | 122 32 |
| 23 32 $\frac{1}{3}$ | 23 32 $\frac{5}{8}$ | 8 33 $\frac{1}{2}$ | 119 55 |
| 23 31 $\frac{2}{3}$ | 23 32 $\frac{1}{8}$ | 10 42 | 116 20 |
| 23 31 | 23 31 $\frac{1}{2}$ | 11 17 | 115 25 |

| | | | |
|---------------------------|-----------------------------------|---------------------|----------------------|
| 23 30 $\frac{5}{6}$ | bis vno quia altero non potuit | 11 50 | 114 35 |
| 23 30 $\frac{3}{4}$ | vnico tantum pinnac. | 13 48 | 111 40 |
| 23 30 $\frac{1}{2}$ | 23 30 $\frac{3}{4}$ | 16 27 $\frac{1}{2}$ | 107 45 |
| 23 29 $\frac{5}{6}$ | 23 30 $\frac{1}{4}$ | 19 57 | 102 40 |
| 23 30 $\frac{5}{6}$ | 23 29 $\frac{5}{6}$ | 22 44 | 99 3 |
| 23 29 $\frac{1}{2}$ | 23 30 $\frac{1}{3}$ | 25 36 | 94 35 |
| 23 30 $\frac{1}{4}$ | 23 29 $\frac{1}{2}$ | 32 10 | 84 50 |
| Alt. ☉ Merid. per Chalyb. | | 57 35 | 30 |
| | | vel | 25 |
| per Volub. | | 57 35 | 45 |
| per Tych., | | nouo | 57 36 $\frac{1}{12}$ |
| | | veteri | 57 35 $\frac{5}{6}$ |

Quadrans Chalybeus & Volubilis dabant, vt videre est, eandem ☉ altitudinem quam hesterno die 11 Junij.

Decl. ☉ per Armillas 23 29 $\frac{5}{6}$
maiores 23 30

Erat satis ferenum.

Eodem die 12 P. M. diem.

| Declin. ☉ | Altit. ☉ per Volub. a Mer. a occ. | Azim. ☉ |
|---------------------|--------------------------------------|-------------------------------|
| 23 29 $\frac{1}{2}$ | 23 29 $\frac{5}{6}$ | 28 1 $\frac{3}{4}$ 91 5 |
| 23 29 $\frac{1}{2}$ | 23 29 $\frac{1}{3}$ | 26 57 $\frac{1}{2}$ 92 45 |
| 23 29 $\frac{1}{2}$ | 23 29 $\frac{1}{3}$ | 20 $\frac{3}{4}$ per Q. Min. |
| 23 29 $\frac{2}{3}$ | 23 29 $\frac{5}{6}$ | 20 $\frac{1}{12}$ per Q. Min. |
| 23 30 vtroq. | 17 | per Q. Min. |
| 23 30 $\frac{1}{3}$ | 23 30 $\frac{1}{6}$ | 15 $\frac{1}{6}$ |
| 23 30 $\frac{1}{4}$ | 23 30 $\frac{1}{3}$ | 14 0 per Chalyb. |
| 23 30 $\frac{1}{4}$ | 23 30 $\frac{1}{3}$ | 13 20 |

N. B. Hoc die erat aër purior, & a vaporibus liberior ☉ quam hesterno die.

| | | |
|---------------------|---------------------|------------------|
| 23 30 $\frac{5}{6}$ | 23 30 $\frac{1}{2}$ | 12 40 |
| 23 30 $\frac{2}{3}$ | 23 31 $\frac{1}{3}$ | 11 $\frac{1}{3}$ |
| 23 32 | 23 31 $\frac{1}{3}$ | 9 $\frac{1}{4}$ |
| 23 32 | 23 32 $\frac{1}{2}$ | 8 0 per Q. min. |
| 23 32 $\frac{1}{3}$ | 23 33 | 6 45 |
| 23 33 $\frac{1}{2}$ | 23 33 $\frac{2}{3}$ | 6 10 |
| 23 34 $\frac{1}{4}$ | 23 33 $\frac{5}{6}$ | 5 40 |
| 23 34 $\frac{5}{6}$ | 23 34 $\frac{1}{4}$ | 5 15 |
| 23 35 $\frac{1}{6}$ | 23 35 $\frac{1}{2}$ | 4 50 |
| 23 35 $\frac{5}{6}$ | | 4 30 |

DIE 13 JUNIJ, MANE.

| Declinatio ☉ | Altit. ☉ | Azim. ☉ ab ortu ad Mer. |
|---------------------|---------------------|----------------------------|
| 23 31 $\frac{1}{2}$ | 23 32 $\frac{1}{6}$ | 9 55 $\frac{3}{4}$ |
| 23 31 $\frac{1}{6}$ | 23 32 | 10 30 $\frac{5}{6}$ 116 35 |

| | | | |
|----------------------------|---------------------|---------------------|----------------------|
| 23 31 $\frac{1}{6}$ | 23 31 $\frac{3}{4}$ | 11 31 $\frac{1}{4}$ | 115 0 |
| 23 31 $\frac{5}{6}$ | vno pin. | 11 57 $\frac{1}{2}$ | 114 20 |
| altero non poterat accipi. | | | |
| 23 30 | | 12 40 $\frac{1}{2}$ | 113 25 |
| 23 31 $\frac{1}{3}$ | 23 32 | 13 47 $\frac{1}{2}$ | 112 0 |
| 23 31 | 23 30 $\frac{1}{2}$ | 14 30 $\frac{1}{2}$ | 111 0 $\frac{1}{2}$ |
| 23 31 $\frac{1}{3}$ | 23 31 $\frac{3}{4}$ | 15 46 | 108 40 $\frac{1}{2}$ |
| 23 30 | 23 30 $\frac{3}{4}$ | 16 57 | 107 0 |
| 23 29 $\frac{1}{2}$ | 23 30 | 19 3 $\frac{3}{4}$ | 103 55 |
| 23 29 $\frac{1}{2}$ | 23 30 | 21 10 | 100 53 |
| 23 29 $\frac{1}{3}$ | 23 30 | 22 9 | 99 28 |

DIE 14 JUNIJ, VESPERI.

| Declinatio ☉ | Altit. ☉ |
|--------------|--|
| 23 28 | 23 27 $\frac{5}{6}$ 17 0 per Q. min. |
| 23 28 | 23 28 $\frac{2}{3}$ 15 30 $\frac{2}{3}$ Non erat |
| 23 28 | 23 28 $\frac{1}{2}$ 15 0 bene |
| 23 30 | 23 29 $\frac{1}{4}$ 10 $\frac{1}{6}$ ferenum |

DIE 16 JUNIJ.

| | |
|--------------------------|-------------------------------|
| Alt. ☉ Merid. per Volub. | 57 31 $\frac{1}{2}$ |
| per Chalyb. | 57 31 25 |
| per Tychon., | vet. 57 31 |
| | nouo pin. 57 31 $\frac{1}{3}$ |
| Declin. ☉ per | 23 25 15 |
| Armilla. maior. | 23 25 30 |
| Erat satis ferenum. | |

DIE 17 JUNIJ.

| | |
|-----------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 57 29 |
| per Volub. | 57 29 $\frac{1}{2}$ |
| per Tychon., | vet. 57 29 |
| | nouo 57 29 $\frac{1}{2}$ |
| Declin. ☉ per Armillas mai. | 23 23 $\frac{3}{4}$ |
| subterraneas | 23 23 $\frac{1}{2}$ |
| Erat satis ferenum. | |

DIE 18 JUNIJ.

| | |
|---------------------------|--------------------------|
| Alt. ☉ Merid. per Chalyb. | 57 26 $\frac{1}{3}$ |
| per Tychon. | vet. 57 26 $\frac{1}{4}$ |
| | nouo 57 26 $\frac{3}{4}$ |
| Declin. ☉ per Armillas | 23 21 |
| subterraneas | alt. 23 20 $\frac{5}{6}$ |
| Erat bene ferenum. | |

DIE 20 JUNIJ.

Paulo ante duodecimam meridianam obseruabatur ☉ declin. 23 15
per Armill. mai. subterr. alt. 23 14 $\frac{1}{4}$
☉ postea tegebatur nubibus, idcirco
altitudo non poterat obseruari.

DIE 22 JUNIJ.

| | | |
|--------------------------|--------------|------------------|
| Alt. ☉ Merid. per Volub. | 57 | 12 $\frac{1}{4}$ |
| per Chalyb. | 57 | 12 $\frac{1}{6}$ |
| per Tychon. | nouo 57 | 11 $\frac{3}{4}$ |
| | vet. pin. 57 | 12 |
| Declin. ☉ per Arm. mai. | 23 | 6 $\frac{1}{2}$ |
| | alt. 23 | 5 $\frac{1}{2}$ |

DIE 26 JUNIJ.

| | | |
|-----------------------------|--------------|------------------|
| Alt. ☉ Merid. per Volub. | 56 | 50 $\frac{3}{4}$ |
| per Chalyb. | 56 | 50 $\frac{1}{8}$ |
| Declin. ☉ per Arm. subterr. | 22 | 45 $\frac{1}{2}$ |
| | alt. pin. 22 | 46 |

DIE 3 JULIJ.

| | | |
|----------------------------|--------------|------------------|
| Alt. ☉ Merid. | nouo 56 | 0 |
| per Tychon., | vet. 55 | 59 $\frac{3}{8}$ |
| per Volub. | 55 | 59 $\frac{1}{2}$ |
| Declin. ☉ per Armill. mai. | 22 | 5 |
| | alt. pin. 22 | 6 |

Erat bene ferenum.

DIE 10 JULIJ.

| | | | |
|---------------------------|--------------|------------------|----|
| Alt. ☉ Merid. per Chalyb. | 54 | 49 | 55 |
| per Tychon., | nouo 54 | 49 | 50 |
| | vet. 54 | 50 | 10 |
| Decl. ☉ per Armill. | 20 | 45 $\frac{1}{2}$ | |
| subterr. | alt. pin. 20 | 45 | |

DIE 19 JULIJ.

| | | |
|---------------------------|-----------|------------------|
| Alt. ☉ Merid. per Chalyb. | 52 | 55 |
| Declin. ☉ per Arm. | 18 | 50 $\frac{1}{2}$ |
| maiores | altero 18 | 50 |

DIE 22 JULIJ.

| | | |
|---------------------------|---------|------------------|
| Alt. ☉ Merid. per Chalyb. | 52 | 11 $\frac{1}{2}$ |
| per Muralem, | nouo 51 | 11 $\frac{1}{3}$ |
| | vet. 52 | 11 $\frac{1}{2}$ |
| Declin. ☉ per Arm. | 18 | 6 $\frac{1}{3}$ |
| subterr. | 18 | 5 $\frac{1}{2}$ |

Erat mediocriter ferenum.

DIE 29 JULIJ.

| | | |
|---------------------------|--------------|------------------|
| Alt. ☉ Merid. per Chalyb. | 50 | 17 $\frac{3}{4}$ |
| per Tychon., | nouo 50 | 18 $\frac{1}{2}$ |
| | vet. 50 | 18 $\frac{2}{3}$ |
| Declin. ☉ per Arm. | 16 | 13 $\frac{1}{3}$ |
| subterr. | alt. pin. 16 | 12 $\frac{1}{2}$ |

Erat bene ferenum.

DIE 31 JULIJ.

| | | |
|---------------------------|---------|------------------|
| Alt. ☉ Merid. per Chalyb. | 49 | 43 $\frac{5}{8}$ |
| per Tychon. | 49 | 43 $\frac{1}{2}$ |
| | nouo 49 | 44 |
| Declin. per Armill. mai. | 15 | 38 $\frac{1}{2}$ |
| | 15 | 38 $\frac{1}{3}$ |

DIE 2 AUGUSTI.

| | | |
|---------------------------|----------------|-----------------|
| Alt. ☉ Merid. per Chalyb. | 49 | 7 $\frac{1}{2}$ |
| per Tychon., vno tantum | 49 | 8 |
| Declin. per Arm. subterr. | 15 | 3 |
| | altero pin. 15 | 2 $\frac{1}{2}$ |

Non erat satis ferenum.

DIE 15 AUGUSTI.

| | | |
|---------------------------|-----------|------------------|
| Alt. ☉ Merid. per Chalyb. | 45 | 15 $\frac{1}{4}$ |
| per Mural., | veteri 45 | 14 $\frac{5}{8}$ |
| | nouo 45 | 15 $\frac{1}{8}$ |

DIE 16 AUGUSTI.

| | | |
|------------------------------|-----------|------------------|
| Alt. ☉ Merid. per Chalyb. | 44 | 55 |
| per Tychon. | 44 | 54 $\frac{1}{8}$ |
| | nouo 44 | 54 $\frac{1}{2}$ |
| Declin. per Armill. subterr. | 10 | 49 $\frac{1}{2}$ |
| | altero 10 | 49 $\frac{3}{4}$ |

Non erat bene ferenum.

DIE 23 AUGUSTI.

| | | |
|----------------------------|-------------|------------------|
| Alt. ☉ Merid. per Tychon. | 42 | 31 $\frac{1}{3}$ |
| | altero 42 | 3 $\frac{2}{3}$ |
| per Chalyb. | 42 | 3 |
| Declin. per Armill. maior. | 7 | 57 $\frac{1}{4}$ |
| | alt. pin. 7 | 57 $\frac{2}{3}$ |

DIE 2 SEPTEMBRIS.

| | | |
|------------------------------|----|------------------|
| Alt. ☉ Merid. per Chalyb. | 38 | 17 $\frac{1}{2}$ |
| Declin. per Armill. subterr. | 4 | 12 $\frac{1}{2}$ |

Non erat satis ferenum.

DIE 4 SEPTEMBRIS.

| | | |
|------------------------------|---------|------------------|
| Alt. ☉ Merid. | | |
| per Tych., | vet. 37 | 30 $\frac{5}{8}$ |
| | nouo 37 | 31 $\frac{1}{8}$ |
| per Chalyb. | 37 | 31 $\frac{1}{2}$ |
| Declin. per Armill. subterr. | 3 | 25 $\frac{1}{2}$ |
| | 3 | 25 |

Erat bene ferenum.

DIE 5 SEPTEMBRIS.

| | | |
|----------------------------|-----------|------------------|
| Alt. ☉ Merid. per Tychon. | 37 | $7\frac{5}{6}$ |
| | nouo | 37 8 |
| per Chalyb. | 37 | $8\frac{1}{3}$ |
| Declin. per Armill. maior. | 3 | 2 |
| | alt. pin. | 3 $2\frac{1}{2}$ |

Erat bene ferenum.

DIE 6 SEPTEMBRIS.

| | | |
|------------------------------|------|--------------------|
| Alt. ☉ Merid. per Chalyb. | 36 | 45 |
| per Mural. | 36 | $44\frac{1}{2}$ |
| | nouo | 36 $44\frac{5}{6}$ |
| Declin. per Armill. subterr. | 2 | $40\frac{1}{2}$ |
| | | 2 39 |

Erat satis ferenum.

DIE 8 SEPTEMBRIS.

| | | |
|---------------------------|------|-------------------|
| Alt. ☉ Merid. per Muralem | 35 | $34\frac{1}{2}$ |
| | nouo | 35 35 |
| per Chalyb. | 35 | $35\frac{1}{3}$ |
| Declin. per Armill. | 1 | $29\frac{1}{2}$ |
| | | 1 $28\frac{1}{3}$ |

Erat bene ferenum.

DIE 15 SEPTEMBRIS.

| | | |
|---------------------------|-----------|--------------------|
| Alt. ☉ Merid. per Tychon. | 33 | $13\frac{1}{2}$ |
| | nouo | 33 $13\frac{3}{4}$ |
| per Chalyb. | 33 | 14 |
| Declin. per Armillas | 0 | $51\frac{1}{2}$ |
| | alt. pin. | 0 52 |

Non erat satis ferenum.

DIE 27 SEPTEMBRIS.

| | | |
|--|--------|--------------------|
| Alt. ☉ Merid. | veteri | 28 $33\frac{1}{6}$ |
| per Tychon. | nouo | 28 $33\frac{2}{3}$ |
| per Chalyb. | | 28 $34\frac{5}{6}$ |
| Declin. ☉ | | 5 $29\frac{3}{4}$ |
| Eodem pinnacidio (quia alterum non bene se habebat) repetita | | |
| | | 5 $30\frac{3}{4}$ |

Erat mediocriter ferenum.

DIE 9 OCTOBRIS.

| | | |
|----------------------|----|----------------|
| Alt. ☉ Merid. | 24 | $3\frac{1}{4}$ |
| per Tychon. | 24 | $3\frac{1}{2}$ |
| per Chalyb. | 24 | $4\frac{5}{6}$ |
| Declin. ☉ | 10 | 2 |
| per Armill. subterr. | 10 | $2\frac{5}{8}$ |

Erat mediocriter ferenum.

DIE 10 OCTOBRIS.

| | | |
|----------------------------|------|--------------------|
| Alt. ☉ Merid. per Tychon. | 23 | $42\frac{1}{2}$ |
| | nouo | 23 43 |
| per Chalyb. | 23 | 43 |
| Declin. per Armill. maior. | 10 | 24 |
| | | 10 $24\frac{1}{2}$ |

Erat mediocriter ferenum.

DIE 13 OCTOBRIS.

| | | |
|------------------------------|--------|--------------------|
| Alt. ☉ Merid. per Tychon. | 22 | 38 |
| | veteri | 22 $37\frac{1}{2}$ |
| per Chalyb. | 22 | $39\frac{1}{6}$ |
| Declin. per Armill. subterr. | 11 | 28 |
| | veteri | 11 $28\frac{2}{3}$ |

Erat mediocriter ferenum.

DIE 23 OCTOBRIS.

| | | |
|---------------------------|--------|--------------------|
| Alt. ☉ Merid. per Tychon. | 19 | $16\frac{2}{3}$ |
| | | 19 $16\frac{5}{6}$ |
| per Chalyb. | 19 | $17\frac{3}{4}$ |
| Declin. per Armill. | bis 14 | $48\frac{1}{12}$ |

Erat satis ferenum.

DIE 28 OCTOBRIS.

| | | |
|------------------------------|------|--------------------|
| Alt. ☉ Merid. per Chalyb. | 17 | $46\frac{1}{3}$ |
| per Muralem, | vet. | 17 $44\frac{3}{4}$ |
| | nouo | 17 $45\frac{1}{4}$ |
| Declin. per Armill. subterr. | 16 | 20 |
| | nouo | 16 $20\frac{1}{8}$ |

Erat satis ferenum.

DIE 6 NOUEMBRIS.

| | | |
|----------------------|------|--------------------|
| Alt. ☉ Merid. | nouo | 14 $48\frac{1}{2}$ |
| per Tychon. | | 14 48 |
| per Chalyb. | | 14 $45\frac{1}{2}$ |
| Declin. ☉ | | 19 $16\frac{1}{4}$ |
| per Armill. subterr. | | 19 17 |

Non erat satis ferenum.

DIE 11 NOUEMBRIS.

| | | |
|---------------------------|----|------------------------|
| Alt. ☉ Merid. per Tychon. | 14 | $7\frac{1}{2}$ |
| | | 14 $7\frac{3}{4}$ |
| per Chalyb. | | 14 $8\frac{1}{6}$ |
| Declin. | 20 | $2\frac{1}{2}$ incerta |
| per Armill. max. | 20 | $2\frac{1}{3}$ |

Erat mediocriter ferenum.

DIE 14 NOUEMBRIS.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Tych. | 13 29 $\frac{2}{3}$ |
| | 13 30 |
| per Chalyb. | 13 31 $\frac{1}{2}$ |
| Decl. per Armill. maiores | 20 36 $\frac{1}{6}$ |
| | 20 36 |

Erat bene ferenum.

DIE 17 NOUEMBRIS.

| | |
|----------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 12 56 $\frac{2}{3}$ |
| per Tych. | 12 55 |
| | 12 55 $\frac{1}{2}$ |
| Decl. per Armill. subterr. | 21 10 |
| | 21 10 $\frac{1}{4}$ |

Erat mediocriter ferenum.

DIE 20 NOUEMBRIS.

| | |
|-------------------------|---------------------|
| Alt. ☉ Merid. | |
| per Tych. veteri tantum | 12 24 $\frac{1}{3}$ |
| per Chalyb. | 12 25 35 |
| per Volub. denuo | |
| rectificatum | 12 25 25 |
| Declin. per Armillas | 21 41 $\frac{1}{3}$ |
| | 21 41 |

Erat mediocriter ferenum.

Post denuo rectificatum Quadrantem Volubilem nouo Orichalco obductum, correcto infuper Chalybeo & etiam exactiores obseruationes quam antea exhibente.

DIE 21 NOUEMBRIS.

| | |
|-------------------------|---------------------|
| Alt. ☉ Merid. per Tych. | 12 15 |
| per Volub. | 12 16 |
| per Chalyb. | 12 15 $\frac{5}{6}$ |
| Declin. per Armill. | 21 50 |
| | 21 50 $\frac{1}{3}$ |

Non erat satis ferenum.

DIE 23 NOUEMBRIS.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 11 58 $\frac{5}{6}$ |
| per Volub. | 11 58 $\frac{2}{3}$ |
| per Mural. | 11 57 25 |
| Declin. per Armill. | 22 6 $\frac{2}{3}$ |
| | alt. pin. 22 7 |

Erat bene ferenum.

DIE 24 NOUEMBRIS.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Tychon. | 11 49 $\frac{1}{3}$ |
| per Volub. | 11 50 $\frac{1}{2}$ |

| | |
|----------------------|---------------------|
| per Sextant. | 11 50 $\frac{3}{4}$ |
| per Chalyb. | 11 50 $\frac{2}{3}$ |
| Declin. per Armillas | 23 44 $\frac{1}{3}$ |
| | 23 44 $\frac{1}{2}$ |

Erat satis ferenum.

DIE 29 NOUEMBRIS.

| | |
|------------------------|------------|
| Alt. ☉ Merid. | |
| per Volub. rectificat. | 11 16 5 |
| per Q. Chalyb. | 11 16 15 |
| per Sext. nouum | 11 16 0 |
| per Q. Tych. | 11 15 fere |
| Declin. ☉ per Armill. | 29 48 50 |
| subterr. | 29 49 15 |

Erat in Meridie bene ferenum.

DIE 3 DECEMBRIS.

| | |
|---------------------------|---------------------|
| Alt. ☉ Merid. per Chalyb. | 10 57 $\frac{1}{6}$ |
| per Volub. | 10 57 25 |
| per Sext. | 10 57 $\frac{1}{4}$ |
| per Muralem | 10 55 $\frac{5}{6}$ |
| Declin. ☉ per Armillas | 23 9 |
| | 23 9 $\frac{1}{6}$ |

Erat satis ferenum.

DIE 4 DECEMBRIS.

| | |
|--------------------------|---------------------|
| Alt. ☉ Merid. per Mural. | 10 52 |
| per Chalyb. | 10 53 $\frac{2}{3}$ |
| per Volub. | 10 54 |
| per Sextant. | 10 54 |
| Declin. ☉ per Armill. | 23 12 $\frac{2}{3}$ |
| | 23 12 $\frac{1}{2}$ |

Erat mediocriter ferenum.

DIE 15 DECEMBRIS.

| | |
|--------------------------|---------------------|
| Alt. ☉ Merid. per Volub. | 10 44 $\frac{5}{6}$ |
| | bona |
| per Chalyb. | 10 44 $\frac{3}{4}$ |
| Declin. ☉ per Armill. | 23 22 $\frac{2}{3}$ |
| | 23 22 $\frac{1}{2}$ |
| Repetita declin. | 23 22 $\frac{1}{2}$ |
| | 23 22 |

Erat bene ferenum.

Pro inuenienda refractione

| | |
|------------------|--------------|
| Locus ☉ | 3° 46' 12" 7 |
| Declin. M. | 23 28 16 |
| Altit. obseruata | 10 44 50 |

| | |
|------------------------|----------|
| Parallaxis | 3' 3" |
| | 10 47 53 |
| | 34 5 15 |
| Decl. ☉ e centro terræ | 23 17 22 |
| Declin. vera ☉ | 23 28 16 |
| Refractio proueniens | 10 54 |

| | |
|---------------------------|---------------------|
| DIE 16 DECEMBRIS. | |
| Alt. ☉ Merid. per Chalyb. | 10 46 |
| per Volub. | 10 46 $\frac{1}{6}$ |
| Decl. per Armill. maxim. | 23 20 |
| | 23 19 $\frac{5}{8}$ |
| Erat mediocriter ferenum. | |

OBSERVATIONES LUNÆ.

DIE 7 SEPTEMBRIS P. M.¹

Tempus aBignatum dubium est.

| | |
|--------------------------|---------------------|
| H. 6 7' Altit. meridiana | |
| superioris cornu ☾ | 14 13 $\frac{5}{8}$ |
| inferioris cornu | 13 44 $\frac{1}{2}$ |
| Diameter | 29 $\frac{1}{3}$ |

Erat tamen paululum prætergreßa meridianum circiter dimidium gradum aut duas tertias, cum propter nubes ante obseruari non potuit.

| | |
|---------------------|---------------------|
| Declinatio austrina | 19 52 |
| superioris cornu | 19 55 $\frac{1}{4}$ |
| inferioris cornu | 20 23 |
| | 20 23 $\frac{2}{3}$ |
| Diameter | 0 29 $\frac{1}{4}$ |

Declin. centri ☾ 20° 8', ex altitudine 20° 6'.

Sed erat cœlum denfiusculis obtectum nubibus.

N. B. Erat tunc ☾ prope Tropicum hybernium & in quadratura prima, ideoque eius parallaxis altitudinis hinc colligi poterit & conferri cum rationibus Ptolemæi & Copernici.

Long. ex Eph. Magini 26 48 ↗, Lat. 4° 1' S.

Eodem die vesperi; tempora hic sunt correctæ.

| | |
|----------------------------------|---------------------|
| 7 51 $\frac{1}{2}$ Declin. | |
| superioris cornu ☾ | 20 5 $\frac{1}{2}$ |
| inferioris cornu | 20 34 $\frac{1}{2}$ |
| Altit. super. cornu ☾ | 11 24 |
| 8 3' 36" distabat occid. limb. ☾ | |
| a Vulture per Sext. | 37 1 |
| Alt. super. cornu ☾ | 11 10 40 |
| 8 8 50 Vult. dist. ab | |
| occ. limb. | 36 59 |

¹ E codice V.

| | |
|----------------------------------|---------------------|
| Altit. super. cornu ☾ | 10 15 |
| 8 14 26 Vultur occid. | 5 57 $\frac{1}{2}$ |
| Inter occ. limb. & Vult. | 36 57 $\frac{1}{6}$ |
| Alt. super. cornu ☾ | 9 55 |
| 8 20 $\frac{1}{3}$ Vultur occid. | 7 26 |
| Eadem dist. Vult. | 36 55 $\frac{1}{3}$ |
| Alt. super. cornu ☾ | 9 33 $\frac{5}{8}$ |

Pro Parallaxi ☾.

| | |
|---------------------|-------------------------------|
| Altit. centri ☾ | 13 59 $\frac{1}{2}$ ad summum |
| Refractio subtrahit | 10 ad summum |
| Vera altitudo | 13 50 |
| Altit. æquatoris | 34 5 |
| Vera declin. | 20 15 |
| Decl. ex calculo | 19 28 |
| Parallaxis ☾ | 0 47 |

Atque talis Parallaxis ☾ potest apud Copernicum esse saltem in maxima eius a terris remotione, verum latitudo ☾ non recte se habet, quia abumitur maxima saltem 5 0, tunc vera latitudo ☾ euaderet p. 4 M. 13, & per consequens declin. eius esset p. 19 M. 16.

Ergo examinatio erit eiusmodi.

| | |
|------------------------|-------|
| Vera declin. obseruata | 20 15 |
| Declin. ex calculo | 19 16 |
| Parallaxis verior | 0 59 |

Quod rectius cum Copernico consentit.

DIE 8 SEPTEMBRIS¹.

| | |
|-------------------------------------|---------------------|
| H. 7 3' Tranfuit occid. limb. ☾ per | |
| Merid. habuitque alt. per Chalyb. | |
| Super. cornu | 13 50 $\frac{1}{6}$ |
| Infer. cornu | 13 19 $\frac{5}{8}$ |

| | | |
|-----------------------------------|----|------------------|
| Declin. austrina superioris | 20 | 17 $\frac{1}{2}$ |
| | 20 | 16 $\frac{2}{3}$ |
| inferioris | 20 | 46 |
| | 20 | 45 $\frac{1}{5}$ |
| 7 34 $\frac{2}{3}$ Vultur orient. | 3 | 16 $\frac{1}{5}$ |
| 7 38 Vultur orient. | 2 | 24 $\frac{2}{3}$ |
| Tempora assignata sunt correcta. | | |

DIE 7 OCTOBRIS.

| | |
|---|---------------------|
| H. 6 38 $\frac{2}{3}$ ' Transiit occ. limb. ☾ | |
| per Merid. habens altit. | |
| superioris cornu | 15 58 $\frac{1}{2}$ |
| inferioris | 15 26 $\frac{1}{2}$ |
| Diameter | 0 31 $\frac{2}{3}$ |

Fuitque tunc sinister humerus ☿ a Merid. orientalis 8 57, vnde potest tempus elici.

| | |
|--|---------------------|
| 7 5 $\frac{1}{3}$ Declin. super. cornu ☾ | 18 36 $\frac{1}{2}$ |
| 7 7 $\frac{2}{3}$ inferioris | 18 6 $\frac{1}{2}$ |
| Diameter | 0 30 $\frac{1}{2}$ |

OBSERVATIONES SATURNI.

DIE 29 JANUARIJ, VESPERI.

Post rectificatum horologium hora 6 $\frac{1}{2}$ ad stellas obseruabatur ♄ non multum extra Meridianum digressus in ☐ fere ☉^{is} existens in hunc qui sequitur modum.

| Tempus | Inter ♄ & lucid. ♀ | Declinatio | |
|-------------------|--------------------|---------------------|---------------------|
| | | vno | alt. pin. |
| 6 32 | | 16 50 $\frac{1}{2}$ | 16 50 $\frac{2}{3}$ |
| 6 55 | 24 37 | 16 50 $\frac{1}{2}$ | 16 50 $\frac{1}{2}$ |
| 6 58 | 24 37 | | |
| | Inter ♄ & ocul. ☿ | | |
| 7 0 | 11 4 | | |
| 7 0 $\frac{5}{6}$ | 11 3 $\frac{1}{2}$ | | |

DIE 30 JANUARIJ, VESPERI.

| | |
|---|---------------------|
| H. 6 0 $\frac{1}{2}$ Transiit ♄ Merid. habens altitudinem per Chalyb. | 50 55 $\frac{1}{2}$ |
| per Sext. | 50 55 $\frac{2}{3}$ |
| per Volub. | 50 55 |
| per Mural. | 50 56 |

DIE 27 MARTIJ, VESPERI.

| | |
|------------------------------|------------------------------|
| 8 18' Declin. ♄ | 18 3 $\frac{1}{2}$ |
| | alt. pin. 18 3 $\frac{1}{3}$ |
| Altit. ♄ per Q. min. | 17 45 |
| 8 21 $\frac{1}{3}$ Inter ♄ & | 7 17 |
| 8 22 oculum ☿ | 7 17 |
| 8 23 | 7 17 $\frac{1}{2}$ |
| Altit. ♄ | 17 10 |

Tempora assignata sunt correcta.

DIE 28 OCTOBRIS, VESPERI¹.

| | |
|--|---------------------|
| 9 10' Erat oculus ☿ | |
| a Meridie ad orient. | 56 50 |
| Distabat tunc ♄ ab oc. ☿ | 9 33 $\frac{1}{2}$ |
| Declin. ♄ erat | 7 24 |
| | 7 24 $\frac{1}{6}$ |
| 9 21 $\frac{1}{3}$ Oculus ☿ a Mer. ad ort. | 53 39 |
| Dist. tunc ♄ ab Aldeb. | 9 33 $\frac{1}{3}$ |
| Declin. oculi ☿ | 20 50 |
| | 20 50 $\frac{2}{3}$ |
| 9 24 $\frac{2}{3}$ Oculus ☿ | |
| a Merid. ad ort. | 52 35 |
| Dist. tunc ♄ ab oculo ☿ | 9 33 $\frac{1}{6}$ |
| 9 29 $\frac{1}{2}$ Inter oculum ☿ & | 33 39 |
| 9 30 $\frac{2}{3}$ superius caput ♀ | 33 39 |

DIE 14 NOUEMBRIS.

| | |
|------------------------------|--------------------------|
| 11 12' Erat Aldebora orient. | 27 3 |
| Declin. ♄ tunc erat | Bor. 20 28 $\frac{5}{6}$ |
| | alt. 20 29 |

| | Inter ♄ & Aldeb. | Aldeb. erat or. |
|---------------------|------------------------------|---------------------|
| 11 18 $\frac{2}{3}$ | 8 23 $\frac{1}{2}$ | 25 32 |
| 11 22 $\frac{1}{3}$ | 8 23 $\frac{1}{4}$ | 24 32 |
| 11 25 $\frac{1}{6}$ | 8 22 $\frac{1}{2}$ | 23 56 $\frac{1}{2}$ |
| 11 27 $\frac{1}{2}$ | 8 23 $\frac{1}{4}$ | 23 25 |
| 11 31 | . . . ² | 22 40 $\frac{1}{2}$ |
| | Inter super. cornu ☿ & ♄ | |
| 11 34 $\frac{2}{3}$ | 8 53 $\frac{1}{4}$ | 21 48 $\frac{1}{2}$ |
| 11 37 $\frac{5}{6}$ | 8 52 $\frac{5}{6}$ | 21 8 |
| 11 43 $\frac{1}{3}$ | 8 52 $\frac{3}{4}$ Luc. hum. | |
| | Or. or. | 40 4 $\frac{1}{2}$ |

¹ Hinc usque ad finem anni e codice V.

² In codice: »Inter ♄ & luc. ped. Erichtonij«, sed distantia deest.

DIE 20 NOUEMBRIS, VESPERI.

| | | |
|---------------------|--|------------------------|
| 10 16 $\frac{1}{2}$ | Declin. h B. | 20 25 |
| | | 20 24 $\frac{1}{4}$ |
| | Repetita declin. | 20 25 $\frac{1}{8}$ |
| | | 20 24 $\frac{1}{4}$ |
| | Tunc erat oculus O or. | 19 35 |
| 10 27 $\frac{5}{8}$ | Inter h & oculum O | 7 55 $\frac{2}{3}$ |
| 10 29 | Oculus O a meridie | 16 46 |
| 10 31 | Inter h & oculum O | 7 56 |
| | Oculus O a meridie | 16 0 |
| 10 34 $\frac{1}{2}$ | Inter h & Bor. cornu O | 9 9 |
| | Ocul. O a mer. or. | 15 21 |
| 10 36 $\frac{1}{3}$ | Inter h & bor. cornu O , | mel. 9 8 $\frac{1}{3}$ |
| | Oculus O orient. | 14 55 |

DIE 23 NOUEMBRIS, VESPERI.

h obseruatio in O \odot . Transitus Ald.
per Merid. H. 11 M. 35.

| | | |
|-----------------------|--|--------------------------|
| | Inter h & oculum O | 7 42 $\frac{1}{2}$ |
| | Oculus O a Merid. or. | 8 55 |
| H. 11 0 $\frac{1}{4}$ | Inter h & oculum O | 7 42 $\frac{1}{2}$ |
| | Ocul. O a Merid. or. | 8 34 |
| | Inter h & oculum O | 7 42 $\frac{1}{4}$ |
| | Ocul. O a Merid. or. | 8 5 |
| | Inter h & bor. cornu O | 9 20 |
| | Oculus O a Mer or. | 7 12 |
| 11 7 $\frac{2}{3}$ | Inter h & | |
| | luc. ped. Ericht. | 9 18 $\frac{1}{2}$ |
| | Oculus O a Merid. or. | 6 48 |
| | Inter h & luc. ped. Ericht. | 9 19 $\frac{1}{3}$ |
| | Oculus O a Merid. | 6 13 |
| | Inter h & bor. cornu O | 9 19 |
| | Oculus O a Merid. | 5 57 |
| | Declin. h | 20 23 |
| | | alt. 20 22 $\frac{1}{2}$ |
| | Oculus O a Mer. or. | 5 0 |
| | Declin. h | 20 23 $\frac{1}{4}$ |
| | Oculus O a Mer. or. | 4 4 $\frac{3}{4}$ |

DIE 29 NOUEMBRIS, VESPERI.

| | | |
|--|--------------------------------------|----------------------------------|
| | Inter h & Aldeb. | 7 19 $\frac{3}{4}$ |
| | Declin. h | 20 19 $\frac{5}{8}$, alt. 20 20 |
| | Oculus O orient. | 68 53 $\frac{1}{2}$ |
| | Inter h & oculum O | 7 19 $\frac{3}{8}$ |
| | Oculus O a Merid. | 68 10 |
| | Inter h & luc. ped. Ericht. | 9 37 $\frac{1}{4}$ |
| | Oculus O a Merid. or. | 67 47 $\frac{1}{2}$ |
| | Inter h & luc. ped. Ericht. | 9 37 $\frac{1}{4}$ |
| | Oculus O orient. | 67 25 |

| | | |
|--|---|---------------------|
| | Inter h & luc. ped. Ericht. | 9 37 $\frac{1}{8}$ |
| | Oculus O orient. | 66 41 |
| | Erat tunc altit. h 27° fere. | |
| | Inter h & Aldeb. | 7 19 $\frac{1}{2}$ |
| | Oculus O orient. | 28 56 $\frac{1}{2}$ |
| | Inter h & Aldeb. | 7 19 $\frac{3}{4}$ |
| | Oculus O a Merid. or. | 28 30 |
| | Declinatio h | 20 20 $\frac{1}{6}$ |
| | Inter h & boreale cornu O | 9 36 $\frac{1}{2}$ |
| | Oculus O orient. | 27 56 $\frac{1}{4}$ |
| | Declinatio h | 20 20 $\frac{1}{4}$ |
| | Inter h & boreale cornu O | 9 37 |
| | Oculus O orient. | 27 3 |

DIE 3 DECEMBRIS, VESPERI.

| | | |
|--|--------------------------------------|--------------------------|
| | Inter h & oculum O | 7 3 $\frac{3}{4}$ |
| | Altit. h | 23 0 |
| | Oculus O a Mer. or. | 72 30 |
| | Inter h & oculum O | 7 3 $\frac{1}{2}$ |
| | Oculus O a Mer. or. | 71 33 |
| | Inter h & oculum O | 7 3 $\frac{1}{8}$ |
| | Oculus O a Mer. or. | 70 50 $\frac{1}{2}$ |
| | Declin. h 20 19, | alt. 20 18 $\frac{1}{2}$ |
| | Oculus O a Mer. or. | 69 21 |
| | Inter h & pedem Erichtonij | |
| | siue superius cornu O | 9 50 |
| | Oculus O a Mer. or. | 68 48 $\frac{1}{3}$ |
| | Inter h & ped. Ericht. luc. | 9 49 $\frac{1}{2}$ |
| | Oculus O a Merid. or. | 68 17 $\frac{2}{3}$ |
| | Inter h & ped. Ericht. luc. | 9 50 $\frac{1}{6}$ |
| | Oculus O a Mer. or. | 67 20 $\frac{1}{2}$ |

DIE 20 NOUEMBRIS.

| | | |
|-----------------------------|----------------------------|----------------------|
| H. 10 M. 38 | Dist. h ab Aldeb. | 7 56 |
| | Declinatio h | 20 24 $\frac{1}{2}$ |
| | Ascens. R. Aldeb. | 63 7 |
| | Ergo Ascens. R. h | 69 46 |
| H. 10 M. 46 | Dist. h | |
| | a luc. ped. Ericht. | 9 9 |
| | Ascens. R. ped. Ericht. | 75 6 15 |
| | Ergo Ascens. R. h | 69 48 $\frac{1}{12}$ |
| Afc. R. h limitata | | |
| H. 10 M. 40: | | 69 47, |
| | Declin. 20 24 30 | |
| Resp. Longitudo | 11 5 30 | II |
| Latitudo | 1 47 0 m. | |

DIE 23 NOUEMBRIS.

| | | |
|-----------------------|----------------------------|--------------------|
| H. 11 0 $\frac{3}{4}$ | Dist. h ab Aldeb. | 7 42 $\frac{1}{2}$ |
| | Declinatio h | 20 23 |

Angulus differ. Ascension. 6 22 30
 Ergo hinc Ascens. R. η 69 29 30
 H. 11 8 Dist. η a pede Erich. 9 18 $\frac{1}{2}$
 Declinatio η 20 23
 Hinc angulus differ. Ascens. 5 36 0
 H. 11 0' Ascens. R. η limitata 69 29 50
 Resp. Longitudo 10 49 $\frac{1}{2}$ II
 Latitudo 1 47 $\frac{1}{4}$ M.

Colligitur autem ex his (præcipue ex
 obseruatione 20 diei Nouemb.) oppo-
 sitionem η cum simplici \odot incidisse in
 diem 21 Nouemb. H. 19 M. 45 P. M., in
 10° 59' 0" fere II, cum Latitud. 1 47 0 M.
 Sed limitatius omnia considerando,

ex obseruatione diei 20 Nouemb. in
 11 5 $\frac{1}{2}$ II ad tempus \odot sunt dies 1 H. 9,
 quibus in antecedentia regreditur η
 Min. 7, quæ si auferantur a Long.
 prædicta fuerit locus eius tempore
 \odot 10 58 $\frac{1}{2}$, & collatione facta cum die
 23 pro tempore intermedio addenda
 Minuta 8 $\frac{1}{2}$, vt fuerit hinc locus in
 \odot 10 57 40, differ. a priore est 50",
 cuius medium additum dat verum lo-
 cum \odot η cum \odot in 10 58 5. Hinc au-
 ferantur pro motu eius æquali in suo
 ductu 2' 5" & remanebit verus locus
 \odot η cum simplici \odot 10 56 0 II.

OBSERUATIONES IOVIS.

DIE 30 JANUARIJ¹.

Mane, P. M. N. Tempus correctum.
 H. 1 13 $\frac{1}{2}$ Inter η & cor \odot
 per Sext. 21 36 $\frac{2}{3}$
 1 17 Distantia eadem 21 37
 1 19 Dist. eadem 21 37
 Declin. η vno 7 0
 alt. 7 0 $\frac{1}{2}$, Alt. 41 0
 1 21 Inter η & Spicam \mathbb{M}
 per Sext. 32 33 $\frac{1}{6}$
 1 21 $\frac{1}{2}$ Eadem inter η &
 Spicam 32 32 $\frac{5}{6}$
 1 23 Eadem distantia 32 33
 Declin. η 7 0 utroque
 Altitudo η 41 3

*Horologium in Meridie sequente
 celerius ibat M. 42 $\frac{1}{2}$, qui error illi ab
 Hora 6 $\frac{1}{2}$ P. M. antecedentis diei im-
 putandus venit, nam non erat multis
 diebus antea correctum.*

DIE 15 FEBRUARIJ, VESPERI.

N. B. Obseruationes η , ipso ten-
 dente ad \odot .

Horologium hodie ad Solis meridi-
 anam altitudinem rectificatum.

H. 8 39 Declin. per Armillas 7 50 B.
 alt. 7 49 $\frac{1}{2}$

Tunc fuit Alt. eius 22 52

Dist. per Sext. inter η & Cor \odot Alt. η

| | | |
|--------------------|-------------------------------|--------------------|
| 8 47 $\frac{1}{6}$ | 19 34 | 24 5 |
| 8 50 | 19 34 $\frac{1}{2}$ | 24 17 |
| 8 51 $\frac{1}{2}$ | 19 34 $\frac{1}{2}$ | 24 27 |
| | Inter η & caudam \odot | |
| 8 57 | 11 2 | 25 9 |
| 8 58 $\frac{1}{6}$ | 11 1 $\frac{5}{6}$ | |
| 8 59 $\frac{1}{2}$ | 11 2 | 25 29 |
| 9 1 $\frac{1}{2}$ | Declin. η repetita | 7 49 $\frac{1}{2}$ |
| | altero pinnac. | 7 49 $\frac{1}{2}$ |

*Repetatur obseruatio η quando est
 iuxta meridianum.*

DIE 21 FEBRUARIJ.

Ante Meridiem.

H. 0 8 η per Merid. in Alt.
 per Chalyb. 42 10
 per Volub. 42 10
 0 19 $\frac{3}{4}$ Declin. η per Armill.
 vtroque 8 3 $\frac{1}{2}$
 0 29 $\frac{1}{2}$ Inter η & cor \odot 18 56 $\frac{1}{2}$
 0 30 $\frac{1}{2}$ 18 56
 0 32 $\frac{1}{2}$ 18 56 $\frac{3}{4}$
 0 34 18 56 $\frac{1}{2}$
 0 37 $\frac{1}{2}$ Inter η & Spicam \mathbb{M} 35 14 $\frac{1}{4}$
 0 39 35 14 $\frac{1}{4}$
 0 40 35 14
 0 41 Decl. η repetita, vno 8 3 $\frac{1}{2}$
 alt. 8 3 $\frac{3}{4}$

N. B. Tempora assignata sunt cor-
 recta per Spicam \mathbb{M} .

¹ Cf. infra inter obseruationes »Pro refractionibus stellarum fixarum indagandis«, vbi obseruationes declina-
 tionis Iovis reperiantur.

PRO LOCO ♄.

DIE 30 JANUARIJ.

H. 1 M. 17 Distabat ♄

| | |
|---------------------|----------------------|
| a corde ♄ | 21 37 |
| Decl. ♄ | 7 0 $\frac{1}{4}$ B. |
| Decl. Cordis ♄ | 13 57 5 |
| Differentia Asc. R. | 20 50 6 |
| Asc. R. Cordis ♄ | 146 35 25 |
| Asc. R. ♄ | 167 25 31 |

H. 1 23 Distabat ♄

| | |
|----------------------|---------|
| a Spica ♄ | 32 33 |
| Declin. ♄ | 7 0 B. |
| Declin. Spicæ Aufst. | 8 57 20 |
| Differ. Asc. R. ♄ & | |

Spicæ

Asc. R. Spicæ

Asc. R. ♄

Emendata Asc. R. ♄

Declin. Borea

Respondet Long.

Latitudo

Calculus Prut. Long. 15 47

Latit. 1 24 B.

Alph. Long. 14 14 ♄

Latit. 1 40 B.

DIE 21 FEBRUARIJ.

Ante Meridiem vel post mediam noctem antecedentem.

H. 0 M. 30 $\frac{1}{2}$ Dist. ♄

| | |
|-----------------------|---------------------|
| a corde ♄ | 18 56 $\frac{1}{2}$ |
| Declin. ♄ Bor. | 8 4 $\frac{1}{2}$ |
| Declin. cordis ♄ Bor. | 13 57 $\frac{1}{2}$ |
| Diff. ascension. | 18 21 23 |
| Asc. R. ♄ ex corde ♄ | 164 56 48 |

Viceversa eodem die ante meridiem.

H. 0 M. 39 Distabat ♄

| | |
|----------------------|---------------------|
| a Spica | 35 14 $\frac{1}{4}$ |
| Declin. ♄ Borea | 8 4 $\frac{1}{2}$ |
| Declin. Spicæ Merid. | 8 57 $\frac{1}{2}$ |
| Diff. ascension. | 30 57 23 |
| Asc. R. ♄ ex Spica | 164 57 7 |

Ergo venit emendata

Ascensio ♄ Recta

Declinatio Bor.

Resp. Long. ad H. 0. 36 13 1 58 ♄

Latitudo

| | | |
|--------------|-------------|-------------|
| Observatio | Calc. Prut. | Calc. Alph. |
| Long. 13 2 ♄ | 13 13 ♄ | 11 35 ♄ |
| Lat. 1 30 B. | 1 30 B. | 1 43 B. |

Conuenit itaque satis Prutenicus calculus, desideratis saltem 12 scrupulis.

DIE 27 FEBRUARIJ.

Hora 8 $\frac{1}{2}$ Horologium verificabatur.

| Tempus | Diff. inter ♄ & cor ♄ | Alt. ♄ | Declin. ♄ vno pin. | Bor. alt. |
|--------------------|-------------------------------|--------|--------------------|--------------------|
| 9 12 $\frac{1}{6}$ | 18 1 $\frac{1}{2}$ | | | |
| 9 14 $\frac{5}{6}$ | 18 2 $\frac{1}{3}$ | | 8 24 | 8 25 |
| 9 17 $\frac{2}{3}$ | non erat serenum. | | | |
| 9 18 $\frac{1}{2}$ | 18 2 $\frac{3}{4}$ mel. 35 10 | | | |
| 9 20 | 18 2 $\frac{5}{6}$ | | 8 24 $\frac{1}{2}$ | 8 25 $\frac{1}{2}$ |

N. B. Inter nubes subinde recurrentes factæ sunt hæ obseruationes.

DIE 7 MARTIJ, VESPERI.

Horologium in Meridie corrigebatur.

| | | |
|--------------------|------------------------|------------------------|
| 7 16 $\frac{5}{6}$ | Distabat ♄ a corde ♄ | 17 2 $\frac{1}{2}$ |
| 7 18 $\frac{1}{6}$ | Eadem diff. | 17 2 |
| 7 19 $\frac{2}{3}$ | Eadem | 17 2 |
| 7 23 | Fuit Alt. ♄ per Volub. | 27 13 $\frac{1}{2}$ |
| | Declin. ♄ | vno 8 48 $\frac{1}{2}$ |
| | | alt. 8 48 |
| Declin. ♄ repetita | | 8 48 $\frac{1}{2}$ |
| | | alt. 8 49 |

DIE 10 MARTIJ, VESPERI.

Horologium verificabatur hodie post Meridiem ad ☉ ex Æquatore.

| | | |
|--------------------|---------------------------------|-----------------------------|
| 8 50 $\frac{1}{2}$ | Inter ♄ & cor ♄ | 16 42 |
| 8 52 $\frac{1}{6}$ | Eadem diff. | 16 42 |
| 8 54 $\frac{1}{6}$ | repet. | 16 41 $\frac{3}{4}$ |
| | Alt. ♄ ad vlt. temp. per Volub. | 38 $\frac{1}{2}$ |
| | Declin. ♄ B. | vno pin. 8 56 $\frac{1}{2}$ |
| | | alt. 8 56 $\frac{1}{2}$ |

| | | |
|--------------------|-----------------------|---------------------|
| 8 58 $\frac{1}{6}$ | Inter ♄ & caud. ♄ | 11 55 $\frac{5}{6}$ |
| 9 1 $\frac{2}{3}$ | | 11 56 |
| 9 2 $\frac{1}{2}$ | | 11 56 $\frac{1}{4}$ |
| | Alt. ♄ ad vlt. tempus | 39 15 |
| | Declin. ♄ | 8 56 $\frac{1}{2}$ |
| | | alt. 8 56 |

9 37 Transiit cor ♄ per Merid. pro verificando horologio.

DIE 12 MARTIJ, MANE.

| | | |
|------|-----------------|-------------------------|
| 2 20 | Declin. ♄ B. | vno 8 59 $\frac{1}{2}$ |
| | | alt. 8 59 $\frac{1}{2}$ |
| 2 26 | Inter ♄ & cor ♄ | 16 31 |
| 2 28 | Inter ♄ & cor ♄ | 16 31 |
| | Altit. ♄ | 26 $\frac{1}{4}$ |

| | | |
|-------|--------------------|--------|
| 2 31½ | Inter ♄ & Spicam ♀ | 37 36½ |
| 2 32½ | | 37 36 |
| | Alt. ♄ per Q. min. | 25 30 |

DIE 13 MARTIJ, VESPERI.

| | | |
|-------|--------------------|-----------|
| 8 22 | Inter ♄ & cor ☉ | non valet |
| 8 24½ | Eadem dist. repet. | 16 19½ |
| 8 26½ | Eadem dist. repet. | 16 19½ |
| 8 30½ | | 16 20 |

| | | |
|--|----------------|------|
| | Declin. ♄ Bor. | 9 4 |
| | | 9 4½ |

| | | |
|---------|------------------|-------|
| | Tunc fuit Alt. ♄ | 37 30 |
| 8 34 45 | Inter ♄ & | 12 4 |
| 8 36 40 | caudam ☉ | 12 3½ |
| 8 38 10 | Eadem dist. | 12 4 |
| 8 40½ | Declin. | 9 3¾ |

alt. 9 4

Alt. ♄ tunc erat per Q. min. 38 0

9 27 Transiit cor ☉ per Merid., hinc
potest horologium verificari.

DIE 15 MARTIJ, VESPERI.

| | | |
|----------|-------------------------|----------|
| 11 17½ | Inter ♄ & cor ☉ | 16 6¼ |
| 11 19 | | 16 6¾ |
| 11 22 | | 16 6 |
| 11 27½ | Inter Spicam & ♄ | 38 2 |
| 11 29 | | 38 2½ |
| 11 30½ | | 38 2½ |
| 11 38 25 | Decl. ♄ per Armilla. | 9 8½ |
| | | alt. 9 9 |

DIE 31 MARTIJ, VESPERI.

| | | |
|---------|-----------------|------------|
| 8 27½ | Inter ♄ & cor ☉ | 14 41 |
| | Altitudo ♄ | 42 45 |
| 8 29 | Inter ♄ & cor ☉ | 14 41½ |
| 8 37 | | 14 41½ |
| 8 44 10 | Declin. ♄ Bor. | 9 41½ |
| 8 49½ | Inter ♄ & | 39 28½ |
| 8 51½ | Spicam ♀ | 39 28½ |
| 8 54 | | 39 29 |
| 9 2 | Declin. ♄ | 9 41½ |
| | | alt. 9 40½ |

9 6¾ Spica a Meridie 37 2
9 8 ad ortum 36 45
pro horologio verificando.

Tempora assignata sunt correcta.

DIE 27 MAIJ.

Vesperis Horologium corrigebatur.

| Inter ♄ & Spicam | | Declin. ♄ | | Alt. ♄ |
|------------------|--------|-----------|--------|--------|
| 11 41½ | | 10 44½ | 10 45 | 7 0 |
| 11 47½ | 38 43 | | | |
| 11 49½ | 38 43¾ | | | |
| 11 51 | 38 44 | | | |
| 11 54½ | | 10 42½ | 10 42½ | 5 0 |

DIE 21 NOUEMBRIS, MANE¹.

Inter ♄ & cor ☉ 48 12½
♄ tunc erat orient. a Merid. 12 44
Erat declin. ♄ tunc 3 42½ M.
Plura hoc tempore obseruare non
licuit propter nubes.

OBSERUATIONES MARTIS.

DIE 12 FEBRUARIJ, MANE.

| | | |
|-----------------------------|---|-------------|
| Altitudo Meridiana ♂ | | |
| per Volub. | | 21 37½ dub. |
| per Chalyb. | | 21 38 55 |
| 5 8' | Inter ♂ & Spicam ♀ | 21 7½ |
| | | 21 7¾ |
| 5 11½ | Inter ♂ & præcedens finist. genu Ophiuchi | 26 11 |
| | | 26 10¼ |
| 5 13 | Fuit Alt. ♂ per Q. | 19 36 |
| 5 14½ | Repet. dist. inter ♂ & finist. genu Ophiuchi | 26 10½ |
| 5 19 | Declin. ♂ | 13 33½ |
| | | 13 32½ |
| Altitudo merid. dat declin. | | 12 27½ |

¹ E codice V.

DIE 9 MARTIJ, MANE.

| | | |
|-------|-------------------------|-------------|
| 4 25 | Distabat ♂ a Spica ♀ | 24 29 |
| 4 27½ | Eadem dist. | 24 29 |
| 4 33 | Eadem dist. repet. | 24 28½ |
| | Fuit tunc Alt. ♂ | 15 0 |
| | Decl. ♂ | 13 36 M. |
| | | 13 36½ |
| 4 34 | Inter ♂ & genu Oph. | 23 4 |
| 4 34½ | Eadem dist. repet. | 23 4½ |
| 4 38½ | | 23 4¾ |
| | Tunc Alt. ♂ | 14 0 |
| 4 41½ | Declin. ♂ | 13 36½ |
| | | alt. 13 36½ |

| | | |
|---------|------------------|--------------------|
| 4 43 55 | Lucid. Vult. or. | 33 56 |
| 4 45 42 | | 33 27 |
| 4 47 5 | | 33 5 $\frac{3}{4}$ |

Hinc potest horologium verificari.

DIE 10 MARTIJ.

9 37 Transiuit cor \odot per Merid. pro verificando horologio.

Post mediam noctem, Die 11 mane.

2 30' 15" Transibat \odot Meridianum habens Alt. per Chalyb. 20 28 $\frac{1}{2}$
per Sext. 20 28

2 50 $\frac{1}{2}$ Declin. \odot alt. pin. 13 37 $\frac{1}{2}$

2 54 $\frac{1}{8}$ Distabat \odot a Spica 24 26 $\frac{1}{2}$

2 55 $\frac{1}{2}$ Eadem dist. repet. 24 26 $\frac{1}{2}$

2 57 24 26 $\frac{1}{6}$

3 0 $\frac{1}{2}$ Inter \odot & præced. 23 3

3 1 $\frac{3}{8}$ genu Ophiuchi 23 3 $\frac{1}{2}$

Nota. Pro inueniendo loco genu Ophiuchi obseruabatur eius distantia a Spica M per Sext. 47 3 $\frac{1}{2}$
47 4

Et viceuersa inter eandem Ophiuchi & Lucid. Vult. capiebatur distantia 51 51
51 51 $\frac{2}{3}$

Declin. genu præc. Oph., vtroq. 9 37

Horologium in meridie proxime sequenti 10' iusto tardius mouebatur a meridie fere proxime antecedenti.

DIE 12 MARTIJ, MANE.

2 35 Transiuit \odot per Merid. habens Altit. per Chalyb. 20 28 $\frac{1}{2}$

per Sext. 20 28 $\frac{1}{4}$

per Volub. 20 28 $\frac{1}{2}$

Declinatio \odot alt. 13 37

2 44 $\frac{1}{8}$ Dist. inter \odot & Spic. M 24 24

2 45 $\frac{2}{3}$ Eadem dist. repet. 24 23 $\frac{2}{3}$

2 48 Inter \odot & præced. 23 9

2 49 $\frac{2}{3}$ genu Ophiuchi 23 9 $\frac{1}{3}$

2 53 $\frac{1}{6}$ Eadem dist. repet. 23 8 $\frac{5}{6}$

2 56 $\frac{5}{6}$ Spica a Merid. 29 41

2 58 $\frac{1}{2}$ ad occasum 30 1

Hinc potest horologium verificari.

DIE 14 MARTIJ, MANE.

2 23 $\frac{1}{6}$ Alt. \odot Mer.

per Chalyb. 20 28 $\frac{5}{6}$

per Volub. 20 28 $\frac{2}{3}$

2 30 $\frac{5}{6}$ Inter Spicam & \odot 24 19

2 32 Eadem dist. 24 19 bis

2 33 $\frac{1}{2}$ Inter \odot & præced. genu Ophiuchi 23 11

2 35 Eadem dist. repetita 23 10 $\frac{2}{3}$

Decl. \odot Auft. per Arm. 13 37

13 36 $\frac{1}{2}$

2 38 25" Tunc fuit Spica a Merid. 28 40 ad occasum pro horologio.

DIE 16 MARTIJ, MANE.

2 28 Alt. \odot Merid. per Chal. 20 29 $\frac{5}{6}$

per Volub. 20 29

per Q. min. Azim. 20 29

2 40 Decl. \odot Mer. per Arm. 13 36

alt. 13 35 $\frac{5}{6}$

2 44 $\frac{1}{2}$ Inter Spicam & \odot 24 9 $\frac{1}{2}$

2 45 45 Ead. dist. repet. 24 9 $\frac{1}{2}$

2 47 45 Inter \odot & præced. 23 23

2 49 $\frac{1}{3}$ genu Ophiuchi 23 23 $\frac{1}{3}$

2 52 $\frac{1}{3}$ Spica occid. 29 55

2 53 5 Spica occid. 30 9
pro horologio verificando.

DIE 23 MARTIJ, MANE.

2 49 $\frac{2}{3}$ Erat \odot Declin. 13 26

per Armill. Auft. 13 26 $\frac{1}{2}$

3 8 $\frac{1}{2}$ Inter \odot & Spicam M 23 11

3 9 $\frac{2}{3}$ Eadem dist. 23 11 $\frac{1}{3}$

3 11 15 23 10 $\frac{2}{3}$

3 13 $\frac{1}{3}$ 23 11

Tunc fuit Alt. \odot 19 30

3 17 5 Inter \odot & præced. 24 16

3 18 30 genu Ophiuchi 24 15 $\frac{1}{2}$

3 25 Eadem dist. 24 15 $\frac{1}{3}$

3 27 25 Declin. \odot , vtroque 13 26 $\frac{1}{2}$ M.

Fuit tunc Alt. \odot 18 50

3 30 5 Spica M occid. 42 55

3 30 52 43 5

3 31 15 43 13 $\frac{1}{2}$

Hinc error horologij, si quis fuerit, corrigi potest.

DIE 4 APRILIS, VESPERI.

H. 10 8 $\frac{5}{6}$ Declin. \odot 12 41 $\frac{2}{3}$ M.

Altit. \odot per Volub. 16 30

Inter nubes

DIE 5 APRILIS, VESPERI.

| Tempus correctum | Inter ♂ & Spicam | Alt. ♂ per Vol. | Decl. ♂ M. |
|---------------------|-------------------------------|---------------------|--------------------------|
| 11 14 $\frac{1}{4}$ | | 18 48 | 12 40 $\frac{1}{3}$ |
| | | | alt. 12 40 $\frac{1}{2}$ |
| 11 22 $\frac{1}{6}$ | 19 43 | | |
| 11 32 | 19 43 $\frac{1}{4}$ | | |
| 11 34 | 19 42 $\frac{5}{6}$ | | |
| | Inter ♂ & Bor. lanc. Ω | | |
| 11 41 | 9 21 $\frac{5}{6}$ | | |
| 11 44 | 9 21 $\frac{2}{4}$ | | |
| 11 46 | 9 21 $\frac{1}{3}$ | | |
| 11 49 $\frac{2}{3}$ | | 20 23 $\frac{1}{2}$ | 12 40 $\frac{2}{3}$ |
| 11 52 | Spica occ. | 6 4 $\frac{1}{2}$ | pro horo- |
| 11 53 | Spica occ. | 6 20 | logio |

DIE 8 APRILIS.

Post mediam noctem.

Horologium velocius mouebatur 7 $\frac{1}{2}$.

| Temp. | Altitudo ♂ Meridiana | |
|---------------------|-------------------------------|---------------------|
| corr. | per Chalyb. | 21 38 |
| 12 32 $\frac{1}{2}$ | per Volub. | 21 38 $\frac{1}{4}$ |
| 12 45 $\frac{1}{2}$ | Declin. ♂ M., vtroq. | 12 27 |
| 12 50 | Inter ♂ & Spicam \mathbb{M} | 18 42 |
| 12 51 $\frac{2}{3}$ | Eadem dist. | 18 42 |
| 12 53 | repetita | 18 41 |
| 12 59 $\frac{1}{2}$ | Inter ♂ & bor. | 10 8 |
| 1 1 $\frac{1}{2}$ | lancem Ω | 10 8 $\frac{1}{2}$ |
| 1 3 $\frac{1}{2}$ | Eadem dist. | 10 8 $\frac{1}{6}$ |
| 1 7 | Spica \mathbb{M} occid. | 27 35 |
| 1 8 $\frac{1}{2}$ | pro horologio | 28 0 |

DIE 13 APRILIS, VESPERI.

| | | |
|---------------------|------------------|---------------------|
| H. 11 12 | Spica orientalis | 3 31 |
| corr. | Altitudo ♂ | 20 12 $\frac{1}{2}$ |
| | Declin. ♂ M. | 12 2 $\frac{1}{2}$ |
| | | 12 2 $\frac{3}{4}$ |
| 11 15 $\frac{2}{3}$ | Inter ♂ & Spicam | 16 56 $\frac{1}{4}$ |
| | Altitudo ♂ | 20 19 $\frac{1}{2}$ |
| 11 16 $\frac{1}{2}$ | Eadem dist. | 16 56 $\frac{1}{6}$ |
| | Altitudo ♂ | 20 19 |
| 11 18 $\frac{2}{3}$ | Inter ♂ & bor. | 11 33 $\frac{3}{4}$ |
| 11 19 $\frac{1}{2}$ | lancem Ω | 11 34 |

DIE 15 APRILIS.

Mouebatur Horol. velocius 5' 30".

N.B. ♂ iuxta ♂ ☉.

| | | |
|---------------------|------------------------|---------------------|
| 11 50 | Alt. ♂ Merid. per Vol. | 22 12 $\frac{1}{2}$ |
| | per Chalyb. | 22 13 |
| 11 56 $\frac{1}{2}$ | Inter Spicam & ♂ | 16 11 |

| | | |
|---------------------|-----------------------------|---------------------|
| 11 58 $\frac{1}{6}$ | Eadem dist. | 16 11 $\frac{1}{4}$ |
| 12 2 $\frac{1}{2}$ | repet. | 16 11 |
| 12 10 $\frac{2}{3}$ | Inter ♂ & auf. | 5 23 $\frac{1}{2}$ |
| 12 14 | lanc. Ω | 5 24 |
| 12 15 $\frac{1}{3}$ | Eadem dist. | 5 24 |
| 12 18 $\frac{5}{6}$ | Borealis } pro ho- | 5 36 |
| 12 23 $\frac{1}{3}$ | lanx Ω or. } rologio | 4 45 |
| | Declinatio ♂ | 11 53 |
| | | 11 53 $\frac{1}{4}$ |

DIE 20 APRILIS, VESPERI.

Horologium correctum est.

| | | |
|---------------------|------------------------|--------------------------|
| 10 49 $\frac{1}{3}$ | Altitudo ♂ | 22 3 $\frac{1}{2}$ |
| | Declinatio ♂ | 11 27 M. |
| | | alt. 11 27 $\frac{1}{4}$ |
| 10 54 $\frac{1}{3}$ | Dist. inter ♂ & Spicam | 14 21 $\frac{1}{2}$ |
| 10 56 $\frac{1}{2}$ | Eadem distantia | 14 21 $\frac{1}{6}$ |
| 10 59 $\frac{1}{2}$ | repetita | 14 21 $\frac{1}{6}$ |
| 11 1 30" | Eadem dist. | 14 21 $\frac{1}{4}$ |
| 11 4 $\frac{1}{3}$ | Declin. ♂ | 11 27 $\frac{3}{4}$ |
| | | 11 27 $\frac{5}{6}$ |
| | Alt. ♂ | 22 24 |

Præcedentium obseruationum
♂ in Calculum reductio,
pro eius loco in ☉ ♂
inquiendo.

DIE 5 APRILIS.

Cum obseruaretur ♂ fuit in Alt.

| | | |
|------------------------|-----------------------------------|---------------------|
| | per Volub. | 18 48 |
| H. 11 22 $\frac{1}{3}$ | Inter ♂ & Spicam \mathbb{M} | 19 43 |
| | Declin. ♂ Merid. | 12 40 $\frac{1}{2}$ |
| | Declin. Spicæ \mathbb{M} M. | 8 57 $\frac{1}{3}$ |
| | Latus BA 81 | 2 $\frac{2}{3}$ |
| | CA 77 | 19 $\frac{1}{2}$ |
| | BC 19 | 43 |
| | Ang. BAC | 19 43 13 |
| Afc. R. | Spicæ | 195 55 0 |
| Afc. R. | ♂ | 215 38 13 |
| | Vice versa ex bor. lance Ω | |
| H. 11 44 | Inter ♂ & bor. lanc. Ω | 9 21 $\frac{2}{3}$ |
| | Declin. ♂ M. | 12 40 $\frac{2}{3}$ |
| | Decl. bor. lancis M. | 7 46 $\frac{1}{2}$ |
| | Latus BA 77 | 19 $\frac{1}{3}$ |
| | CA 82 | 13 $\frac{1}{2}$ |
| | BC 9 | 21 $\frac{2}{3}$ |
| | Ang. BAC | 8 6 22 |
| Afc. R. | | |
| | bor. lanc. 223 | 45 30 |
| Afc. R. | ♂ | 215 39 8 |

Ponatur ergo H. 11 33
 Asc. R. ♂ 215 38 30
 Declin. M. ♂ 12 40 25
 Resp. H. 11 33 Longitudo 7 31 10M
 Latitudo 1 28 13B.

DIE 8 APRILIS, P. M. N.

H. 12 50 Inter ♂ & Spicam 18 42
 Declin. M. ♂ 12 27
 12 59½ Viceversa a bor. lance 10 8
 BA 81 2 40 82 13½
 CA 77 33 0 77 33
 BC 18 42 10 8
 BAC 18 42 7 9 8 8
 Asc. R. ♂ 214 37 7 214 37 22
 Ergo ponatur H. 12 54
 Asc. R. 214 37 10
 Resp. H. 12 54 Longitudo 6 29 57M
 Latitudo 1 20 50B.

N. B. Fuit ♂ in Meridiano cum obseruaretur.

DIE 13 APRILIS, NOCTU.

Fuit in altitudine 20 grad. cum obseruaretur.

H. 11 16½ Inter ♂ & Spicam 16 56½
 Declin. ♂ Merid. 12 2 40
 11 18½ Viceversa inter ♂
 & bor. lancem 11 33 50
 BA 81 2½ 82 13 30
 CA 77 57 20 77 57 20
 BC 16 56 15 11 33 50
 BAC 16 56 29 add. 10 54 45
 sub.
 Asc. R. ♂ 212 51 29 212 50 45
 Ergo H. 11 17 Asc. R. ♂ 212 51 0
 Resp. Longitudo 4 43 19M
 Latitudo 1 9 35B.

DIE 15 APRILIS.

Obseruatio ♂ circa Meridianum.

H. 11 56 ♂ a Spica 16 11
 Declin. ♂ M. 11 52½
 12 14 Viceversa ab australi
 lance Ω 5 24
 BA 81 2 40 75 46 20
 CA 78 7 30 78 7 30
 BC 16 11 0 5 24 0
 BAC 16 11 17 4 59 23
 Asc. R. ♂ 212 6 17 212 4 37

H. 12 5 Asc. R. ♂ 212 5 30
 Resp. Longitudo 3 58 21M
 Latitudo 1 4 5B.

DIE 20 APRILIS.

N. B. Fuit ♂ in Alt. per Volub. 22 24 cum obseruaretur.

H. 11 1½ Inter ♂ & Spicam 14 21½
 Declin. ♂ auf. 11 27½
 Latus BA 81 2 40
 CA 78 32 30
 BC 14 21 15
 Angulus BAC 14 21 51 add.
 Asc. R. ♂ 210 16 51
 Resp. Longitudo 2 10 5M
 Latitudo 0 51 31B.

DIE 22 APRILIS.

Horologium verificabatur.

11 11½ Inter ♂ & Spicam M 13 36½
 11 18 Alt. Merid. ♂ per Chal. 22 47½
 Declin. ♂ 11 18
 alt. 11 18½
 11 28½ Inter ♂ & Spicam M 13 36½
 11 31½ Repet. 13 36½

DIE 23 APRILIS.

Horologium corr.

10 36½ Declin. ♂ 11 13
 alt. 11 12½
 10 42 Inter ♂ & Spicam 13 15½
 10 46 Repet. 13 16½
 Alt. ♂ per Volub. 22 35
 10 49½ Inter ♂ & auf. 8 18
 10 52 lancem Ω 8 18½

DIE 24 APRILIS.

Horolog. correct.

10 27½ Inter ♂ & Spicam 12 54½
 10 28½ 12 54
 10 31 12 54½
 10 45½ Inter ♂ & auftra-
 liorem lancem Ω 8 37½
 10 47½ 8 38
 10 49½ 8 37
 10 53½ Decl. ♂ per Armill. 11 9
 11 9½
 Alt. ♂ per Volub. 22 51

DIE 27 MAIJ.

| | | |
|------------------------------|---------------------|--------|
| 12 0 Decl. ♂ | 10 20 $\frac{3}{4}$ | Alt. ♂ |
| | 10 20 $\frac{1}{2}$ | 9 0 |
| 12 6 $\frac{1}{4}$ ♂ a Spica | 7 2 | 8 40 |
| 12 8 | 7 2 $\frac{3}{8}$ | |
| 12 9 | 7 2 $\frac{1}{4}$ | |
| 12 15 $\frac{2}{3}$ Inter ♂ | 39 7 $\frac{1}{4}$ | 7 0 |
| 12 17 & cor ♀ | 39 7 $\frac{1}{2}$ | |
| 12 18 $\frac{3}{4}$ | 39 7 $\frac{3}{8}$ | 6 50 |

DIE 15 SEPTEMBRIS¹.

| | |
|--|---------------------|
| 8 4 $\frac{1}{2}$ Declin. ♂ M. | 24 33 |
| Fuit tunc. Alt. ♂ circiter | 4 $\frac{1}{2}$ |
| 8 9 Dist. inter ♂ & luc. hum. ♂ | 19 59 |
| Altitudo ♂ | 3 20 |
| Erat tunc Vultur occid. | 1 40 |
| 8 13 Dist. inter ♂ & luc. hum. ♂ | 19 59 $\frac{1}{6}$ |
| Altitudo ♂ | 2 50 |
| Erat tunc Vultur occ. | 0 30 |
| 8 16 $\frac{2}{3}$ Erat tunc Vultur occ. | 0 57 $\frac{1}{2}$ |
| Altitudo ♂ | 2 35 |
| Dist. inter ♂ & luc. hum. ♂ | 20 0 $\frac{3}{4}$ |

DIE 1 NOUEMBRIS, VESPERI.

| | |
|---|---------------------|
| 5 2' 30" Inter ♂ & vltimam trium in capite ♂ | 10 49 $\frac{1}{2}$ |
| Alt. ♂ | 7 40 |
| Tunc erat os Pegafi or. | 3 2 $\frac{1}{8}$ |
| 5 4 30 Eadem dist. | 10 49 $\frac{3}{4}$ |
| 5 8 $\frac{1}{2}$ Inter ♂ & lucidiorem ♀ ² | 26 51 |
| Erat tunc os Pegafi or. | 1 39 |
| 5 10 $\frac{2}{3}$ Inter ♂ & lucidior. ♀ | 26 51 $\frac{3}{4}$ |
| Erat os Pegafi orient. | 0 47 |
| 5 13 $\frac{1}{3}$ ♂ Declinatio | 23 21 M. |
| | 23 21 $\frac{1}{2}$ |
| Erat tunc os Pegafi a Mer. or. | 0 4 $\frac{1}{2}$ |

DIE 3 DECEMBRIS, VESPERI.

| Dist. ♂ a suprema in cornu ♀ | Alt. ♂ | Decl. ♂ | Distabat prima ala Peg. a Merid. ad occ. |
|------------------------------------|------------------|---------------------|--|
| 19 6 | 12 $\frac{1}{2}$ | | 2 16 |
| 19 6 $\frac{1}{4}$ | 12 $\frac{1}{3}$ | 17 23 $\frac{3}{4}$ | 3 16 $\frac{1}{2}$ |
| 19 6 $\frac{1}{2}$ | 12 $\frac{1}{3}$ | | 4 24 |
| Dist. ♂ a lucidi- ore in pede ♂ | | | |
| 19 0 $\frac{1}{4}$ | 11 50 | | 5 26 $\frac{1}{3}$ |
| 19 0 | 11 $\frac{1}{2}$ | | 6 45 |
| 19 0 | 11 $\frac{1}{6}$ | 17 25 | 7 17 $\frac{1}{2}$ |

LOCA MARTIS³.

Calculus ♂ DIE 12 FEBRUARIJ.

| | |
|----------------------------|-----------|
| Ascensio R. Spicæ ♀ | 195 54 28 |
| Declinatio auf. | 8 57 6 |
| Ascensio R. gen. Oph. | 243 39 0 |
| Declinatio auf. | 9 37 12 |
| Diff. ascens. ex Spica | 21 12 40 |
| Ascens. R. ♂ | 217 7 8 |
| Diff. ascens. ex gen. Oph. | 26 31 0 |
| Ascens. R. ♂ | 217 8 0 |
| Diff. Ascens. rectarum | 52 |
| Ascens. R. ♂ limitata | 217 7 34 |
| Longitudo ♂ | 8 49 18 ♀ |
| Latitudo ♂ | 2 9 13 S. |

Pro loco ♂ ad diem 6. MAIJ ex ob-
servationibus protocollo inscriptis.

| | |
|---|------------------------|
| H. 11 $\frac{1}{3}$ Distantia ♂ a Spica ♀ | 9 16 $\frac{1}{2}$ |
| Declinatio ♂ | 10 22 $\frac{1}{2}$ M. |

¹ Hinc usque ad finem anni e codice V.

² Adscriptum est postea »sequentem in cauda«.

³ E codice V.

| | |
|--------------------------------------|------------------------|
| Ang. diff. ascens. | 9 18 5 |
| Ascens. R. Spicæ | 195 54 40 |
| Ergo Ascens. R. ♂ | 205 12 45 |
| Eodem tempore dist. ♂ | |
| ab auf. lance | 12 14 |
| Declin. auf. lanc. | 14 14 $\frac{1}{2}$ M. |
| Ang. diff. ascens. | 11 54 3 |
| Asc. R. auf. lanc. | 217 5 0 |
| Ergo Asc. R. ♂ | 205 11 0 |
| H. 11 $\frac{1}{3}$ pone Asc. rectam | 205 12 |
| declinationem | 10 22 $\frac{1}{2}$ |
| Resp. Longitudo | 27 7 $\frac{1}{3}$ Ω |
| Latitudo | 0 6 40 B. |

Pro loco ♂ ad diem 15 SEPTEMBRIS.

| | |
|---|-------|
| H. 7 $\frac{1}{3}$ Distantia ♂ a luc. hum. ♂ | 19 59 |
| Altitudo ♂ ἐν πλάτει | 4° |

| | | |
|-----------------------------------|-----------------------|---|
| Declin. vifa | { ♂ | 24 33 |
| | { hum. x [↑] | 26 36 |
| Afcenf. R. hum. x [↑] | | 277 31 ¹ / ₂ |
| Ergo Afcenf. R. ♂ | | |
| ex hifce | | 225 27 ¹ / ₂ |
| Resp. vifa Longitudo | | 16 47 ² / ₃ x [↑] |
| Latitudo | | 1 41 ¹ / ₂ M. |
| vera Longitudo | | 16 45 ² / ₃ x [↑] |
| Latitudo | | 1 52 ¹ / ₃ M. |
| Simplex motus ♂ corr. | | |
| Simplex longit. a V | | 9 ^{fex} . 6 55 ¹ / ₂ ' |
| Apogæum | | 3 25 30 10'' |
| Anomalia Eccent. | | 5 11 25 20 |
| Anomalia orbis quafi 64° a Perig. | | |

Pro cognoscenda et examinanda latitudine ♂ in ☌ ☉ in Perigæo Eccentri illius DIE 1 NOUEMBRIS vesp̄ri H. 6 M. 10.

| | | |
|--|-----------------------------------|-------------------------------------|
| Distant. ♂ a | { lucida cauda ♂ | 26 51 ¹ / ₂ |
| | { orient. capit. x [↑] | 10 49 ² / ₃ |
| Declinatio ♂ | 23° 22' M. | Altitudo 7°. |
| | Afc. R. | Declin. |
| Caudæ ♂ | 321 8 ¹ / ₂ | 17 53 M. |
| Capitis x [↑] | 281 24 | 21 36 M. |
| Angulus diff. ascenf. | | |
| ex or. cap. x [↑] | | 11 33 52 |
| Angulus diff. ascenf. | | |
| ex luc. caud. ♂ | | 28 8 23 |
| Hinc colligitur Afc. R. ♂ | | |
| limitata | | 292 59 0 |
| Longitudo | | 21 0 43 ♂ |
| Latitudo | | 1 30 30 M. |
| Parall. 2' 30'' Resp. long. 1' 30'' subtr. | | |
| Refract. 8 15 | | lat. 5' 30'' add. |
| | 5 45 | |
| Ergo vera Longitudo | | 20 59 ¹ / ₄ ♂ |
| Latitudo | | 1 36 M. |

OBSERUATIONES VENERIS.

DIE 3 JANUARIJ, MANE.

Nota. Hodie erat app̄ime serenum, vnde bonæ sunt factæ obseruationes.
H. 7¹/₄ horologium est correctum.

| | Inter ♀ & Spicam | Decl. ♀ Aust. | Alt. ♀ Q | Azim. ♀ orient. |
|----------------------------------|-----------------------------------|----------------------------------|-------------|--------------------|
| 7 26 | 50 26 | 19 1 | 13 5 | |
| 7 29 | 50 26 | 19 0 ¹ / ₂ | 13 21 | 19 0 |
| 7 31 ¹ / ₄ | 50 26 ¹ / ₂ | 19 1 ¹ / ₄ | 13 26 | |
| 7 35 ¹ / ₂ | 50 26 ⁵ / ₆ | 19 1 ¹ / ₄ | 13 31 | 17 28 |
| 7 38 ¹ / ₂ | 50 27 | | 13 40 | 16 35 |
| 7 41 ¹ / ₂ | 50 26 ⁵ / ₆ | | 13 45 | 16 0 |
| 7 44 | 50 27 | 19 1 ¹ / ₃ | 13 51 | 15 20 |

Postea obseruabatur ☉ & ♀ in hunc modum.

| H. M. | ♀ & ☉ | Alt. ☉ | Azim. ☉ |
|-------|-----------------------------------|--------|---------|
| 8 47 | 44 49 ³ / ₄ | 2 36 | 44 20 |
| 8 49 | 44 50 | 2 44 | 43 50 |

Erat hoc tempore matut. bene seren.

8 51 Transiuit ♀ Merid. habuitque
Alt. per Chalyb. 15 5
per Volub. 15 4¹/₂

| | ♀ & ☉ | Alt. ☉ | Azim. ☉ | Decl. ☉ aust. |
|------|-----------------------------------|--------|---------|-----------------------------------|
| 8 55 | 44 51 ¹ / ₂ | 3 19 | 42 38 | 21 17 |
| 8 59 | 44 51 ¹ / ₂ | 3 38 | 41 54 | 21 17 ¹ / ₂ |
| 9 1 | 44 52 | 3 51 | 41 25 | 21 17 ³ / ₈ |

| | | | | |
|-----------------------------------|-----------------------------------|---------------------------------------|-------|-----------------------------------|
| 9 4 | 44 52 | 4 3 | 40 50 | 21 18 ¹ / ₄ |
| 9 8 | 44 52 ¹ / ₄ | 4 25 | 40 0 | 21 18 ¹ / ₂ |
| 9 14 | 44 53 | 4 50 | 38 39 | 21 19 ¹ / ₄ |
| 9 20 | 44 52 ³ / ₄ | 5 23 | 37 26 | 21 20 |
| 9 23 | 44 53 ¹ / ₄ | 5 37 | 36 56 | 21 20 ⁵ / ₆ |
| 9 26 ³ / ₄ | 44 53 ³ / ₄ | 5 53 | 36 10 | 21 21 |
| 9 30 | 44 54 | 6 9 | 35 30 | 21 21 ¹ / ₆ |
| 9 37 | 44 54 | 6 40 | 34 5 | 21 22 |
| 9 46 | 44 54 ¹ / ₄ | 7 19 | 32 12 | |
| 9 49 | Declin. ♀ | 19 2 ¹ / ₄ Mer. | | |
| 9 56 | 44 54 ¹ / ₂ | 8 1 ¹ / ₂ | 30 0 | 21 22 ² / ₃ |
| 9 59 ¹ / ₃ | 44 54 ¹ / ₂ | 8 9 ¹ / ₂ | 29 14 | |
| 10 1 | 44 54 ¹ / ₂ | 8 16 | 28 52 | 21 22 ³ / ₄ |
| 10 22 | Declin. ♀ | 19 3 | | |
| 10 26 | 44 55 ³ / ₄ | 9 47 | 23 40 | 21 23 |
| 10 27 ¹ / ₂ | 44 56 ¹ / ₃ | 9 54 | 23 10 | 21 23 ³ / ₄ |
| 10 29 | 44 55 ¹ / ₄ | 10 0 | 22 45 | 21 24 |

Oportet ♀ circa has vltimas obseruationes fuisse in confirmili fere cum Sole altitudine, ideo refractionem & parallaxin æquali proxime tenore exhibuisse, quod expendendum considerandumque diligenter venit.

Horologium in Meridie sequente iusto celerius M. 9¹/₂, qui error illi ab Hora 7¹/₂ matutina imputandus venit.

DIE 6 JANUARIJ, MANE.

Hora 6 $\frac{1}{2}$ horologium verificabatur.

| H. M. | Inter ♀ & auft. lanc. ♀ | Alt. ♀ | Azim. ♀ | Decl. ♀ |
|--------------------|----------------------------|--------|---------|---------|
| 6 31 | | 9 | | 19 36A. |
| 6 36 $\frac{1}{2}$ | 32 25 $\frac{3}{4}$ | 9 34 | 31 5 | |

Inter ♀ & Spicam

| | | | | |
|------|---------------------|------|-------|---------------------|
| 6 42 | 53 48 $\frac{1}{2}$ | 9 59 | 29 50 | 19 35 $\frac{1}{2}$ |
|------|---------------------|------|-------|---------------------|

Inter ♀ & aufst. lancem

| | | | | |
|--------------------|---------------------|--------------------|-------|-------|
| 6 45 | 32 27 $\frac{1}{2}$ | 10 8 $\frac{1}{2}$ | 29 7 | |
| 6 47 $\frac{1}{3}$ | 32 26 $\frac{3}{4}$ | 10 19 | 28 35 | 19 36 |
| 6 50 $\frac{1}{2}$ | 32 27 $\frac{1}{2}$ | 10 30 | 27 50 | 19 36 |

Inter ♀ & Spicam

| | | | | |
|--------------------|---------------------|-------|-------|---------------------|
| 6 53 $\frac{2}{3}$ | 53 48 $\frac{1}{2}$ | 10 43 | 27 5 | |
| 6 56 $\frac{1}{2}$ | 53 49 $\frac{1}{2}$ | 10 54 | 26 30 | 19 36 $\frac{1}{4}$ |
| 7 1 | 53 50 | 11 8 | 25 35 | |
| 7 5 $\frac{5}{6}$ | 53 50 $\frac{3}{4}$ | 11 19 | 24 52 | 19 36 $\frac{1}{3}$ |

| | | | | |
|--------------------|---------------------|-------|-------|---------------------|
| 7 9 $\frac{1}{3}$ | 53 50 $\frac{3}{4}$ | 11 32 | 24 0 | 19 36 $\frac{3}{4}$ |
| | | | | 19 36 $\frac{2}{3}$ |
| 7 13 | 53 51 | 11 45 | 23 5 | 19 37 $\frac{1}{2}$ |
| 7 20 | 53 51 $\frac{1}{2}$ | 12 7 | 21 24 | |
| 7 24 $\frac{1}{2}$ | 53 52 | 12 21 | 20 20 | 19 37 |
| 7 29 | 53 51 $\frac{1}{2}$ | 12 34 | 19 14 | 19 37 $\frac{2}{3}$ |

Inter ☉ & ♀

| Alt. ☉ | Azim. ☉ | Decl. ☉ |
|--------------------|---------------------|--------------------|
| 8 28 $\frac{1}{3}$ | 44 25 $\frac{1}{4}$ | 1 40 |
| 8 31 $\frac{1}{6}$ | 44 26 | 1 58 |
| 8 35 | 44 26 $\frac{2}{3}$ | 2 19 |
| 8 40 $\frac{5}{6}$ | 44 28 $\frac{1}{4}$ | 2 43 $\frac{1}{2}$ |
| 8 44 | 44 29 $\frac{1}{6}$ | 3 13 $\frac{1}{2}$ |

Transibat ♀ per Merid. habens
Alt. per Chalyb. 14 27 $\frac{5}{6}$

| | | | | |
|--------------------|---------------------|--------------------|-------|---------------------|
| 8 53 $\frac{2}{3}$ | 44 30 | 4 7 | 42 10 | 20 46 $\frac{1}{2}$ |
| 9 0 $\frac{1}{2}$ | 44 31 | 4 44 | 40 40 | 20 47 $\frac{2}{3}$ |
| 9 3 $\frac{2}{3}$ | 44 31 $\frac{1}{3}$ | 5 2 | 39 55 | 20 48 |
| 9 8 $\frac{1}{2}$ | 44 31 $\frac{2}{3}$ | 5 28 | 38 50 | 20 48 $\frac{1}{2}$ |
| 9 12 $\frac{5}{6}$ | 44 32 $\frac{1}{4}$ | 5 49 $\frac{1}{2}$ | 37 52 | 20 48 $\frac{1}{2}$ |
| | | | | 20 49 |
| 9 19 $\frac{1}{2}$ | 44 32 $\frac{1}{2}$ | 6 24 | 36 20 | 20 49 $\frac{1}{2}$ |
| | | | | 20 49 |
| 9 25 $\frac{2}{3}$ | 44 32 $\frac{1}{2}$ | 6 55 | 34 55 | 20 50 |
| | | | | 20 49 $\frac{1}{4}$ |
| 9 29 $\frac{1}{2}$ | 44 32 $\frac{1}{4}$ | 7 12 $\frac{1}{2}$ | 34 0 | |
| 9 37 $\frac{1}{3}$ | 44 32 $\frac{1}{2}$ | 7 51 | 32 12 | 20 50 $\frac{2}{3}$ |

In Meridie sequenti horologium 8 $\frac{1}{2}$
Min. iusto tardius mouebatur ab Hora
6 $\frac{1}{2}$ matutina.

DIE 7 JANUARIJ, MANE.

H. 5 Horologium verificatum est ad
Spicam ♄ & cor ♄, & aliquid ponderis
ei iniectum est.

| H. M. | Inter ♀ & Spicam | Alt. ♀ | Azim. ♀ | Decl. ♀ |
|--------------------|---------------------|--------|---------|---------------------|
| 7 7 | 54 57 | 11 14 | | |
| 7 13 $\frac{5}{6}$ | 54 58 $\frac{1}{4}$ | 11 38 | 22 50 | 19 46 $\frac{2}{3}$ |
| 7 16 $\frac{1}{6}$ | 54 58 $\frac{3}{4}$ | 11 45 | 22 15 | |
| 7 19 $\frac{2}{3}$ | 54 59 | 11 56 | 21 24 | 19 47 $\frac{1}{2}$ |
| | | | | 19 47 |
| 7 24 $\frac{1}{3}$ | 54 59 $\frac{1}{4}$ | 12 9 | 20 20 | |
| 7 28 $\frac{1}{3}$ | 54 59 $\frac{1}{4}$ | 12 23 | 19 14 | |
| 7 30 $\frac{1}{3}$ | 54 59 $\frac{1}{2}$ | 12 34 | 18 52 | 19 47 $\frac{2}{3}$ |
| | | | | 19 48 |

7 30 10" Spica occ. 36 2 Ex his
7 34 55 Spica occ. 37 15 colligebatur
errorem horologij insensibilem esse.

Postea obseruabatur ♀ a ☉.

| Temp. | Inter ☉ & ♀ | Alt. ☉ | Azim. ☉ | Decl. ☉ |
|--------------------|---------------------|--------|---------|---------|
| 8 35 $\frac{1}{3}$ | 44 21 $\frac{1}{6}$ | 2 18 | 46 19 | 20 30 |
| 8 41 $\frac{1}{3}$ | 44 21 $\frac{2}{3}$ | 3 3 | 45 0 | 20 32 |
| 8 44 $\frac{1}{2}$ | 44 21 $\frac{2}{3}$ | 3 21 | 44 20 | |

♀ circa hæc tempora tranfuit Merid.
habens Alt. per Chalyb. 14 18

| | | | | |
|--------------------|---------------------|------|-------|---------------------|
| 8 55 $\frac{5}{6}$ | 44 21 $\frac{3}{4}$ | 4 21 | 42 0 | 20 35 |
| 8 58 $\frac{1}{2}$ | 44 22 | 4 39 | 41 20 | 20 35 $\frac{1}{6}$ |
| | | | | 20 35 $\frac{1}{2}$ |
| 9 2 $\frac{2}{3}$ | 44 22 $\frac{1}{4}$ | 5 1 | 40 24 | 20 36 |
| | | | | 20 35 $\frac{1}{3}$ |
| 9 7 $\frac{2}{3}$ | 44 22 $\frac{3}{4}$ | 5 29 | 39 16 | 20 36 $\frac{1}{4}$ |
| | | | | 20 36 $\frac{1}{2}$ |
| 9 11 $\frac{5}{6}$ | 44 22 $\frac{3}{4}$ | 5 51 | 38 24 | 20 37 $\frac{1}{2}$ |

vtroque.

| | | | | |
|--------------------|---------------------|------|-------|---------------------|
| 9 14 $\frac{2}{3}$ | 44 22 $\frac{1}{2}$ | 6 5 | 37 30 | 20 37 $\frac{2}{3}$ |
| 9 17 $\frac{5}{6}$ | 44 23 $\frac{1}{2}$ | 6 23 | 37 4 | 20 38 |
| 9 21 | 44 23 $\frac{1}{4}$ | 6 37 | 36 20 | 20 38 $\frac{1}{6}$ |

Eodem die in Meridie horologium
mouebatur iusto tardius 5 $\frac{1}{2}$ M., qui er-
ror irrepsit ab Hora 5 Matutina.

DIE 12 FEBRUARIJ, MANE.

| H. M. S. | Arct. occ. | Az. ♀ or. | Alt. ♀ | Decl. ♀ |
|-------------------|---------------------|---------------------|--------------------|---------------------|
| 5 52 20 | 38 15 | 45 32 | 3 0 | |
| 5 54 50 | 38 52 | 45 1 | 3 13 | 20 20 |
| | | | | 20 20 $\frac{1}{6}$ |
| 5 57 15 | 39 33 $\frac{1}{4}$ | 44 31 | 3 29 $\frac{1}{2}$ | 20 20 $\frac{1}{2}$ |
| 5 59 40 | 40 6 $\frac{1}{4}$ | 43 57 $\frac{1}{2}$ | 3 42 | 20 21 |
| 6 1 $\frac{1}{3}$ | 40 32 $\frac{1}{4}$ | 43 36 | 3 51 | 20 22 |

DIE 3 DECEMBRIS, VESPERI¹.

| | |
|---|---------------------|
| Dift. ♀ a luc. & fequente | |
| in cauda ζ | 20 49 $\frac{2}{3}$ |
| Altit. ♀ 4 $\frac{1}{2}$ °. Tunc distabat prima alæ Pegasi a Merid. | |
| ad or. | 1 48 |
| Dift. ♀ a luc. & seq. | |
| in cauda ζ | 20 50 $\frac{1}{8}$ |
| Altit. ♀ 4 $\frac{1}{4}$. Prima alæ Peg. or. | 0 46 $\frac{1}{2}$ |
| Declin. ♀ 22 34 $\frac{1}{8}$ Aufst., alt. | 22 35 |
| Dift. ♀ a luc. & seq. in cauda ζ | 20 49 $\frac{2}{3}$ |
| Altit. ♀ 3 40, Decl. ♀ | 22 34 |
| Distabat prima alæ Peg. | vtroque |
| ad. occ. | 0 51 $\frac{1}{4}$ |

DIE 15 DECEMBRIS, VESPERI.

| | |
|---|---------------------|
| 4 47 $\frac{2}{3}$ Dift. inter ♀ & | |
| lucid. Vult. | 34 30 $\frac{1}{2}$ |
| Alt. ♀ 10 $\frac{1}{2}$ per Q. min. | |
| Declin. ♀ | 19 7 $\frac{1}{4}$ |
| Cum obseruaretur decl. | |
| ♀ fuit prima alæ Peg. or. ² | 5 42 $\frac{1}{3}$ |
| 4 55 Inter ♀ & Vulturem | 34 30 |
| Alt. ♀ 9 $\frac{1}{3}$. Erat tunc prima alæ Peg. a merid. occ. | 6 37 $\frac{1}{3}$ |
| 4 59 $\frac{1}{3}$ Inter ♀ & luc. Vult. | 34 30 |
| Prima alæ Pegasi occ. | 7 30 |

OBSERUATIONES MERCURIJ.

DIE 24 MARTIJ, VESPERI.

N. B. Horologium velocius ibat 1 $\frac{1}{3}$ M.
Conspiciebatur ♀.

8 10 $\frac{2}{3}$ Declin. ♀ 14 55 B.
Altitudo eius fuit quasi 5 P.

per Quadr. min.

8 14' 45" Inter ♀ & oculum ☿ 31 53 $\frac{1}{2}$

8 18 Eadem dist. 31 56

8 19 $\frac{1}{2}$ Declin. ♀ 14 58 $\frac{1}{2}$

8 21 $\frac{1}{3}$ Inter ocul. ☿ & ♀ 31 55

In hac postrema obseruatione
fuit Altit. ♀ 3° circiter.

8 33 $\frac{2}{3}$ Canis 31 33 pro verifi-

8 35 $\frac{1}{6}$ minor. 31 56 cando

8 36 occid. 32 9 horologio

Nota. Tempora assignata sunt correcta.

DIE 27 MARTIJ, VESPERI.

Horolog. velocius ibat 12 $\frac{1}{3}$.

Corr. } Declin. ♀ per Arm. 16 18 $\frac{1}{4}$

7 40 $\frac{1}{4}$ alt. 16 17 $\frac{3}{4}$

Tunc erat Altit. eius 8 $\frac{3}{4}$ ° per min. Q.

| | Inter ocul. ☿ & ♀ | Altit. ♀ per Q. min. | Decl. ♀ |
|---------|---------------------|----------------------|---------------------|
| 7 46 | 28 58 | 8 0 | |
| 7 48 | 28 58 $\frac{1}{4}$ | 7 40 | |
| 7 50 30 | 28 58 $\frac{2}{3}$ | 7 30 | |
| 7 53 | | | 16 18 $\frac{1}{2}$ |
| | | | alt. 16 18 |

¹ E codice V.

² Debet esse occ.

| | Inter ☿ & ♀ | | |
|--------------------|---------------------|------|--------------------------|
| 7 56 | 21 54 $\frac{1}{2}$ | 7 15 | |
| 7 59 | 21 55 | | |
| 8 1 | 21 56 | 6 45 | |
| 8 3 | | | 16 19 $\frac{1}{4}$ |
| | Inter ♀ & ocul. ☿ | | |
| 8 9 | 28 55 | 5 0 | |
| 8 11 $\frac{1}{3}$ | 28 53 | 4 30 | |
| 8 13 $\frac{1}{3}$ | 28 52 $\frac{1}{2}$ | 4 20 | |
| 8 15 $\frac{1}{4}$ | | | 16 21 $\frac{1}{2}$ |
| | | | alt. 16 21 $\frac{3}{4}$ |

Obseruatio ♀ denuo instituta.

| | | | |
|--------------------|---------------------|--------------------|---------------------|
| 8 25 $\frac{1}{2}$ | | 2 40 | 16 24 |
| 8 29 | 28 52 | | |
| 8 30 $\frac{1}{2}$ | 28 52 $\frac{1}{2}$ | | |
| 8 32 | 28 50 $\frac{1}{2}$ | 2 0 | |
| 8 36 | | | 16 28 $\frac{1}{2}$ |
| 8 54 $\frac{1}{2}$ | Cor ☿ occid. | 2 42 $\frac{1}{2}$ | |
| 8 56 | Cor ☿ occid. | 3 0 | |

DIE 28 MARTIJ P. M.

| Corr. | Decl. ♀ B. | Dift. inter ☿ & ocul. ☿ | Alt. ♀ |
|--------------------|---------------------|-------------------------|-----------------|
| 8 5 | 16 43 | 16 42 $\frac{1}{2}$ | 6 $\frac{1}{4}$ |
| 8 9 | | 28 9 | 5 55 |
| 8 15 | 16 43 $\frac{5}{8}$ | 28 6 | 5 5 |
| 8 18 | | 28 5 $\frac{1}{2}$ | 4 40 |
| 8 23 | | 28 4 $\frac{1}{2}$ | 4 5 |
| 8 26 | 16 46 | 16 46 $\frac{1}{4}$ | |
| 8 30 $\frac{1}{3}$ | | 21 8 | 3 15 |
| 8 34 | | 21 6 | 2 50 |
| 8 39 | 16 49 $\frac{1}{2}$ | | 2 20 |

DIE 31 MARTIJ, VESPERI.

| Decl. ☿ | Inter ☿ & ocul. ☿ | Alt. ☿ |
|--|---------------------|--------|
| 8 0 10 17 33 $\frac{1}{2}$ 17 33 $\frac{1}{2}$ | 26 8 | 5 0 |
| 8 3 | 26 10 | 4 40 |
| 8 7 | 26 11 | |
| 8 10 | 26 11 | 3 40 |
| 8 13 $\frac{3}{8}$ | 26 10 $\frac{3}{4}$ | 3 0 |

Non potuit ☿ vltcrius obseruari.

Aßignata tempora sunt correcta.

Inquifitio

Longitudinis & Latitudinis ☿
ad fingulos dies quibus obseruabatur,
habita ratione refractionis &
Parallaxeos eius.

N.B. Quibus hifce diebus vfi fumus
diftantia & declinatione respondent
Alt. ☿ 5 proxime graduum.

DIE 24 MARTIJ P. M.

| | |
|---|---------------------|
| H. 8 15' Dift. inter ☿ & Ald. | |
| per Sext. | 31 55 |
| Declin. eius obseruata | 14 55 B. |
| Subt. pro refractione | 8 |
| Emend. pro refract. | 14 47 |
| Parallaxis addit | 3 |
| Declin. ☿ vera | 14 50 |
| Declin. Aldeb. B. | 15 36 $\frac{2}{3}$ |
| Latus BA | 74 23 $\frac{1}{2}$ |
| CA | 75 10 |
| BC | 31 55 |
| Ang. BAC | 33 6 2 |
| Afcenfio R. Aldeb. | 63 6 10 |
| H. 8 $\frac{1}{2}$ Decl. ☿ 14 50, Afc. R. | 30 0 |
| Resp. Long. 3° 4' 42" ☿ | |
| Latit. 2 24 12 B. | |

DIE 27 MARTIJ.

| | |
|-------------------------|-------|
| H. 8 1' Obseruata dift. | |
| inter ☿ & ♄ | 21 56 |

| | |
|-------------------------------|---------------------|
| Declin. ☿ obseruata Bor. | 16 19 $\frac{1}{3}$ |
| Refract. subtr. | 8 |
| Parallaxis addit | 3 |
| Declin. ☿ emendata | 16 14 $\frac{1}{3}$ |
| Declin. ♄ Borea | 18 3 |
| Angulus afcenfionalis | 22 53 23 |
| Fuit tunc Afc. R. ♄ | 55 56 |
| Afc. R. ☿ | 33 2 37 |
| H. 8 9' Diftabat ☿ ab oculo ☿ | 28 55 |
| Declin. ☿ B. | 16 14 $\frac{1}{3}$ |
| BAC | 30 5 26 |
| Afc. R. ☿ | 33 0 44 |
| Ponatur ergo H. 8 9' | |
| Afc. R. ☿ | 33 1 $\frac{2}{3}$ |
| Decl. B. | 16 14 $\frac{1}{3}$ |
| Resp. Longitudo 6° 17' 23" ☿ | |
| Latitudo 2 44 15 B. | |

DIE 28 MARTIJ.

| | |
|------------------------------|---------------------|
| H. 8 15' Dift. ☿ ab oculo ☿ | 28 6 |
| Declin. eius obseruata | 16 44 B. |
| Refractio subtr. | 8 |
| Parallaxis add. | 3 |
| Declin. ☿ emendata | 16 39 |
| BAC | 29 15 26 |
| Afc. R. ☿ | 33 50 44 |
| Ponatur H. 8 15' Afc. R. ☿ | 33 50 $\frac{2}{3}$ |
| Declin. B. | 16 39 |
| Resp. Longitudo 7° 10' 13" ☿ | |
| Latitudo 2 51 28 B. | |

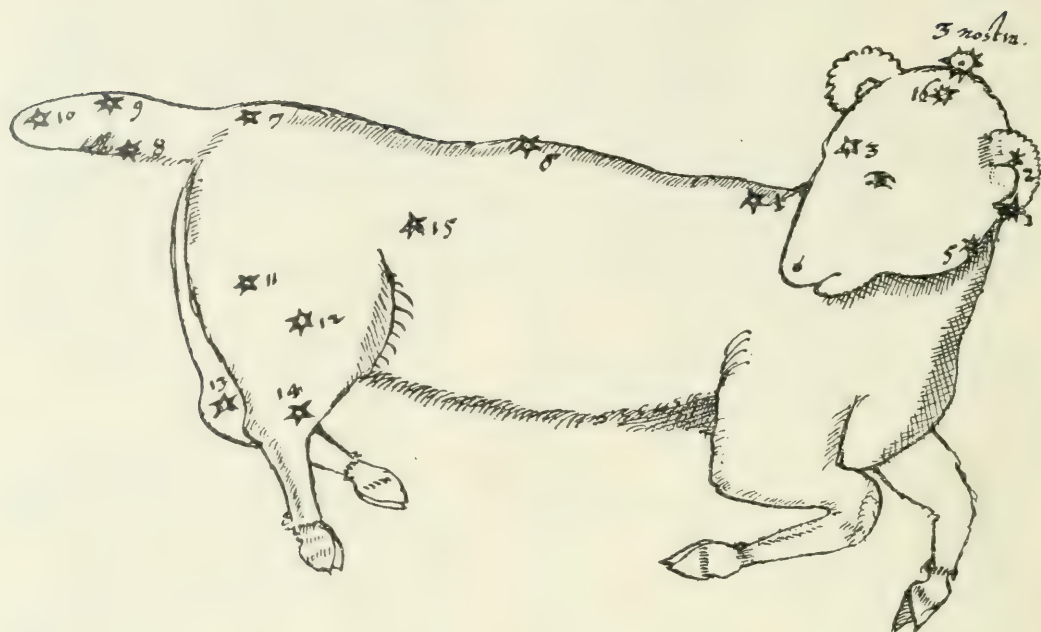
DIE 31 MARTIJ.

| | |
|------------------------------|------------------------|
| H. 8 3' Dift. ☿ & Aldeboræ | 26 10 |
| Declin. ☿ emendata | 17 28 $\frac{1}{3}$ B. |
| BAC | 27 15 |
| Afc. R. ☿ | 35 51 10 |
| Resp. Longitudo 9° 15' 56" ☿ | |
| Latitudo 3 0 24 B. | |

SEQUITUR TABULA CONTINENS LOCUM ☿ EX OBSERUATIONIBUS
ADIUNCTO CALCULO COPERNIANO & ALPHONSINO.

| Menfe Mart. Die | Tempus H. M. | Ex neoterica obseruatione | | Ex Pruten. Mæftlini | | Ex Alph. Cypr. | |
|-----------------------|-----------------|---------------------------|---------------------------|---------------------|---------|----------------|---------|
| | | Longitudo | Latitudo | | | | |
| 24 | 8 15 | 3 ^P 4' 42 | 2 ^P 24' 12" B. | 2 45 ☿ | 1 48 S. | 2 3 ☿ | 1 33 S. |
| 27 | 8 9 | 6 17 23 | 2 44 15 | 6 3 | 2 8 | 6 22 | 1 50 |
| 28 | 8 10 | 7 10 13 | 2 51 28 | 7 2 | 2 15 | 7 43 | 1 55 |
| 31 | 8 3 | 9 15 56 | 3 0 24 | 9 32 $\frac{1}{2}$ | 2 36 | 11 31 | 2 5 |

OBSEUATIONES FIXARUM.
ASTERISMUS ARIETIS.



DIE 5 JANUARIJ.

Alt. merid. luc. \vee per Volub. 55 35
per Chalyb. 55 34 $\frac{1}{2}$

DIE 8 JANUARIJ, VESPERI.

| Numerus delinea- tionis ¹ | Magn. | Inter oculum γ & | |
|--|-------|---|--|
| 16 | 5 | stellulam supra cornua \vee | 37 37 $\frac{1}{2}$ 37 38 |
| 5 | 5 | collum | 37 49 $\frac{1}{2}$ 37 49 $\frac{3}{4}$ |
| 7 | 5 | stellulam in edu- ctione caudæ \vee | 23 19 $\frac{1}{2}$ 23 20 |
| 8 | 4 | primam vel austra- liorem præced. in cauda \vee | 20 17 $\frac{1}{2}$ bis |
| 9 | 5 | mediam caudæ \vee | 19 40 19 39 $\frac{3}{4}$ |
| 10 | 6 | extremam trium in cauda \vee | 18 5 $\frac{1}{2}$ 18 6 $\frac{1}{2}$ |

| | | | |
|----|---|--|--|
| 3 | 6 | præced. duarum in fronte \vee | 34 7 bis |
| 4 | 6 | sequentem duarum in rictu \vee | 32 50 32 49 $\frac{1}{2}$ |
| 11 | 6 | stellulam in femore vel coxendice \vee , est superior & se- quens duarum su- periorum in tali | 23 48 bis |
| 11 | 6 | stellulam in femore maior. \vee , est præcedens duarum superio- rum in quadrato | 25 28 $\frac{1}{3}$ 25 28 $\frac{1}{4}$ |
| 13 | 6 | stellulam in genu \vee posteriori, est sequ- ens duarum inferi- orum in oblongo isto quadrato. | 25 9 $\frac{1}{2}$ 25 9 |
| 14 | 6 | stellulam præce- min. dentis genu, est in- | |

¹ Numeri stellarum fixarum semper e catalogo Ptolemæi citati sunt.

² Adscriptum est postea: »Hic error, fit enim dist. 18 15 $\frac{1}{2}$ «.

| | | | |
|---|----------------------------|----|------------------|
| | feriorum in \square isto | 26 | 45 $\frac{1}{2}$ |
| | præcedens | 26 | 46 |
| 6 | 6 stellulam in dorso | | |
| | ✓ siue limbo | 28 | 7 bis |

Declinationes per Armillas obseruatæ.

Numerus
in Schemate
suo quisque
loco videndus

| | | | |
|-----|---|------|---------------------|
| 5 | Declin. stellulæ in collo ✓ (quæ est infra I ✓) ¹ | 15 | 46 |
| | | | vtroq. |
| 8 | Præcedentis & australioris in cauda | 18 | 6 $\frac{1}{2}$ |
| | | | vtroque |
| 9 | Mediæ caudæ | 19 | 27 |
| | | alt. | 19 27 $\frac{3}{4}$ |
| 10 | Extremæ caudæ | 19 | 39 $\frac{1}{6}$ |
| | | | 19 39 $\frac{1}{4}$ |
| 7 | Stellulæ in educatione | 19 | 40 |
| | vel radice caudæ | 19 | 39 $\frac{1}{4}$ |
| 12 | Præcedentis duarum | 15 | 43 |
| | in femore | 15 | 44 |
| 11 | Sequentis & superioris in aluo siue potius femore, sequentis superiorum \square | 16 | 22 $\frac{1}{2}$ |
| | | 16 | 23 $\frac{1}{2}$ |
| 13 | Posterioris pedis genu, sequentis duarum inferiorum in \square | 13 | 21 |
| | | 13 | 21 $\frac{3}{4}$ |
| 14 | Illius quæ genu præcedit, siue quæ est in genu anteriori posteriorum pedum (præcedentis duarum inferiorum \square) | 13 | 31 |
| | | 13 | 30 $\frac{1}{2}$ |
| ... | Stellulæ quæ est supra cornua ✓ (5 magn: præced. lucidam ✓) | 21 | 33 $\frac{1}{2}$ |
| | | 21 | 34 $\frac{1}{4}$ |
| ... | Extremæ posteriorum pedum | 10 | 41 $\frac{3}{4}$ |
| | | 10 | 41 $\frac{1}{4}$ |
| 3 | Præc. duarum in fronte ✓ | 19 | 16 |
| 4 | Sequentis in rictu | 17 | 57 $\frac{1}{2}$ |
| 6 | Eius quæ est in dorso | 20 | 8 $\frac{3}{4}$ |

DIE 30 JANUARIJ.

Nota. Sequentes obseruationes in stellis ✓ factæ sunt a capite Andromedæ communi cum \square Pegasi, eam

præsertim ob causam, vt ab altera parte versus occasum repetita animaduersione viceversa ascensiones rectæ corrigi possent, & sic etiam in cæteris.

Numerus
delineat.
noft. Mag.

| Inter caput Andromedæ & | | | |
|-------------------------|------|-------------------------|-------------------------|
| 3 | 3 | lucidam capitis | |
| | mai. | vel 3 nostram | 27 7 $\frac{1}{3}$ |
| | | repetita | 27 7 $\frac{1}{2}$ |
| 2 | 3 | secundam ✓ | 25 24 $\frac{1}{2}$ bis |
| 1 | 4 | primam ✓ | 25 49 |
| | mai. | | 25 48 $\frac{5}{6}$ |
| 5 | 6 | ceruicem ✓ | 27 21 |
| | | | 27 21 $\frac{1}{2}$ |
| 16 | 6 | præcedent. trium | 27 14 $\frac{3}{4}$ |
| | | infra lucidam ✓ | 27 15 $\frac{1}{2}$ |
| 3 | 6 | sequentem trium | 29 10 $\frac{1}{6}$ |
| vet. | | infra lucid. in fronte | 29 11 |
| 4 | 6 | ultimam trium in- | 30 50 $\frac{5}{6}$ |
| | | fra lucid. ✓ in rictu | 30 51 |
| 6 | 6 | illam quæ est in | 34 32 $\frac{2}{3}$ |
| | | dorso ✓ præced. | 34 31 $\frac{5}{6}$ |
| 15 | 6 | eam quæ est in dor- | |
| | | so, sequitur prope | |
| | | radicem caudæ | 36 1 $\frac{1}{2}$ |
| | | in aluo | 36 2 |
| 14 | 6 | eam quæ est in ge- | |
| | min. | nu anteriori poste- | |
| | | riorum pedum, est | |
| | | occidentalior dua- | 38 31 |
| | | rum infer. in \square | 38 30 |
| 13 | 6 | eam quæ est in | 40 4 $\frac{1}{3}$ |
| | mai. | genu posteriori | 40 5 |
| 12 | 6 | præcedentem in | |
| | | femore posteriori, | |
| | | est occidental. du- | 38 31 |
| | | arum superiorum | 38 31 $\frac{2}{3}$ |
| 11 | 6 | sequentem in | |
| | | femore | 39 49 bis |
| 7 | 5 | educationem caudæ | 39 12 |
| | mai. | | |
| 8 | 5 | primam caudæ ✓ | 42 28 |
| | | | 42 27 $\frac{1}{2}$ |
| 9 | 5 | mediam caudæ | 42 44 $\frac{5}{6}$ |
| | | | 42 45 $\frac{1}{2}$ |
| 10 | | nebul. extremam caudæ | 44 3 $\frac{1}{3}$ |

¹ Postea adscriptum.

Declinationes earundem per
Armillas.

| Num. delinea- tionis | Mag. | | Limitatio |
|----------------------------|------|---|-------------------------|
| 5 | | Eius quæ est in collo | 15 45½ 15 44½ 15 45½ |
| 16 | | Paruulæ infra lucid. V præced. trium | 20 39 |
| 3 } vet. } | | Sequentis trium vel mediæ trium infra lucid. V quæ præcedit in fronte | 19 14 19 15 |
| 4 | | Sequent. in ictu | 17 57½ 17 57½ |
| 6 | | In dorso | 20 8 20 8½ |
| 15 | 6 | Quæ est in aluo | 18 13½ |
| 13 | | In posteriori genu in □ orientalis | 13 19½ 13 21 13 21 |
| 12 | 6 | In □ super. præced. | 15 43 15 43½ |
| 11 | 6 | In □ super. sequent. | 16 21½ 16 22 |
| 14 | | Præcedentis duarum infer. in □ V | 13 29 13 30 |
| 7 | 5 | In educatione caudæ | 19 40 19 39½ |
| 8 | | Præc. trium in cauda | 18 5½ 18 6 18 6 |
| 9 | | Mediæ trium in cauda | 19 27½ 19 27½ |
| 10 | | Extremæ in cauda | 19 39 19 39 |

DIE 8 FEBRUARIJ.

Capitis Andromedæ Declin. 26 50

alt. 26 49½

Repetita Declinatio 26 50

26 49½

Altitudo eius circa tempus
obseruationis 27½ g.

Ergo non admodum sensibili refractioni fuit obnoxia hæc stella, neque hic neque in præcedentibus obseruationibus. Potes conferre.

Declin. 2 V per Armillas 18 46½

Declin. 1 V¹ per Armillas 21 29

alt. 21 29½

Repetita Declin. 21 29

21 29½

¹ Debet esse 3 V (α Arietis).

DIE 10 FEBRUARIJ.

Primæ Declin. per Armillas 17 14½
17 14½

Habuit altitudinem quasi 35 P.

Secundæ V Declin. vno 18 46½
alt. 18 46½

Altitudo 36½.

Tertiæ V Declin. vtr. pin. 21 29

Altitudo 40 P.

Declin. eiusdem tertiæ vno 21 29
V repetita alt. 21 29½

DIE 23 NOUEMBRIS.

Obseruatio stellarum V, quæ antea
non bene se habuere.

Inter oculum γ & 16 V 35 35½

35 36½

Inter oculum γ & 10 V 18 15½

18 16

Inter oculum γ & 15 V 27 9½

27 10

Alt. merid. lucid. V

per Chalyb. 55 35½

per Volub. 55 34½

DIE 29 NOUEMBRIS, VESPERI.

Alt. merid. secundæ V

per Chal. 52 51½

per Volub. 52 51½

Est media trium lucidarum in V.

Alt. merid. lucidæ V

per Chalyb. 55 34½

per Volub. 55 34½

Inter denfiores nebulas.

DIE 3 DECEMBRIS.

Alt. merid. primæ in capite V

per Volub. 51 21

per Chalyb. 51 20½

Alt. mer. secundæ V

per Chalyb. 52 51½

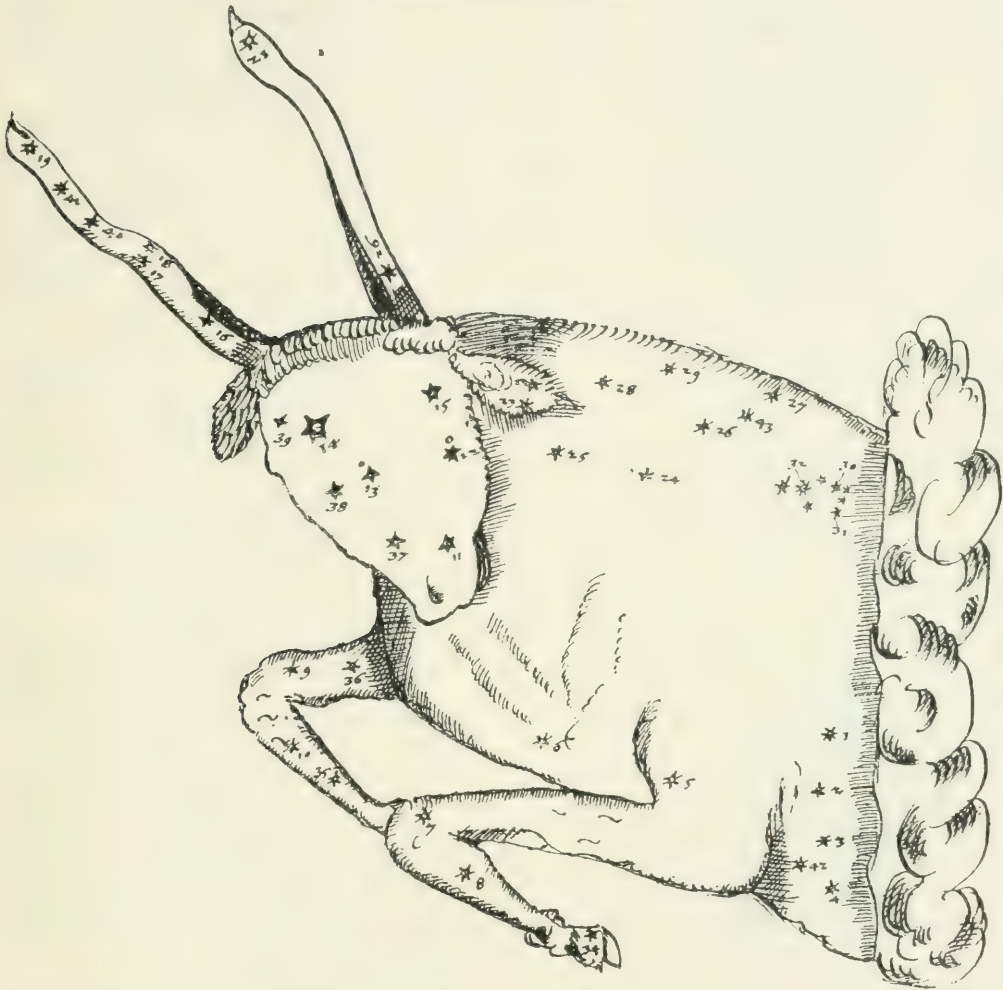
per Volub. 52 51½

Alt. mer. tertiæ seu lucidæ V

per Chalyb. 55 34½

per Volub. 55 34½

ASTERISMUS TAURI
QUEMADMODUM A NOBIS CÆLITUS INTER OBSERUANDUM
DENOTATUS EST.



Numerus situs
quemadmodum
in apposita hic
figuratione
videre est

**DIE 9 JANUARIJ,
VESPERI.**

| | Numer. | quantit. | |
|---|--------|----------|---|
| 4 | 4 | | Inter oculum ☿ & Infimam ex quatuor illis quæ sunt in interfectione ☿ 18 51 $\frac{3}{4}$ bis |
| 3 | 4 | | Secundam proxime superiorem hac 18 5 in interfectione ☿ 18 4 $\frac{1}{2}$ |
| 2 | 6 | | Tertiam infimam in interfectione 16 43 bis |

| | | | |
|----|---|---|--|
| 1 | 5 | Supremam in abscissione | 16 8 $\frac{3}{4}$ bis |
| 42 | 6 | Inter lucidam pedum ♀ & Stellulam quæ est etiam in intersec- tione ☿ apud 2 ab 45 33 $\frac{1}{2}$ austro numerando 45 34 | |
| 5 | 5 | Armum ☿ | 41 23 $\frac{1}{2}$ 41 23 $\frac{3}{4}$ |

| | | | | |
|----|---|-------------------------------|----|---------------------|
| 34 | 6 | Stellulam in vngula | 43 | 20 $\frac{1}{2}$ |
| | | siniftri pedis | 43 | 20 |
| 6 | 4 | Pectus γ | 38 | 8 $\frac{1}{2}$ bis |
| 8 | 4 | Præcedentem in | 39 | 13 $\frac{1}{2}$ |
| | | pede anteriore γ | 39 | 13 $\frac{3}{4}$ |
| 7 | 4 | Genu præcedentis | 35 | 26 |
| | | pedis γ | 35 | 26 $\frac{1}{2}$ |
| 35 | 6 | Stellulam mediam | | |
| | | inter supremam in | | |
| | | præced. pede γ & | | |
| | | inferiorem in sequ- | | |
| | | enti pede, quæ est | | |
| | | cum duabus illis in | 33 | 18 $\frac{3}{4}$ |
| | | recta linea | 33 | 18 |
| 10 | 5 | Australiorem five | | |
| | | inferiorem in pede | 30 | 20 |
| | | sequentivel siniftro | 30 | 19 $\frac{1}{2}$ |
| 9 | 5 | Borealiorem in | | |
| | | pede sequenti γ | 19 | 12 bis |
| 11 | 3 | Primam succularum quæ | | |
| | | est in naribus γ | 33 | 8 bis |
| 13 | 4 | Illam quæ est inter | | |
| | | australem oculum & | | |
| | | nares succularum | 30 | 58 $\frac{3}{4}$ |
| | | tertiam | 30 | 59 |
| 12 | 3 | 2 succularum quæ | | |
| | | est inter nares & | 32 | 13 |
| | | bor. ocul. | 32 | 13 $\frac{1}{2}$ |
| 15 | 3 | Borealem | 30 | 49 |
| | | oculum γ | 30 | 49 $\frac{1}{2}$ |
| 23 | 4 | Australem | | |
| | | in aure γ | 31 | 42 bis |
| 22 | 5 | Borealem in aure | | |
| | | ex duabus lucidio- | 31 | 32 $\frac{1}{2}$ |
| | | ribus | 31 | 33 |
| 33 | 5 | Terminum Pleiadum | | |
| | | vel illam quæ est in | | |
| | | cuspidè proxime ad | | |
| | | orientem | 40 | 7 bis |
| 32 | 3 | Lucid. Pleiadum | 40 | 30 $\frac{1}{2}$ |
| | | | 40 | 30 |
| 30 | 5 | Occidentaliorem | | |
| | | terminum Pleiadum | | |
| | | siue illam quæ est ex- | | |
| | | trema versus occa- | 41 | 6 |
| | | sum in Pleiadibus | 41 | 5 $\frac{3}{4}$ |
| 24 | 5 | Præcedentem in | | |
| | | collo γ , est illa oc- | | |
| | | cidentalior duarum | | |
| | | in collo, quæ sunt in | | |

| | | | | |
|----|---|-----------------------------------|----|----------------------|
| | | recta linea cum bo- | | |
| | | reali oculo & Pleia- | | |
| | | dibus | 36 | 28 bis |
| 25 | 6 | Sequentem dua- | | |
| | | rum earundem in | 33 | 30 $\frac{1}{2}$ |
| | | collo γ | 33 | 31 $\frac{1}{2}$ |
| | | Inter inferius caput Π & | | |
| 20 | 5 | Illam quæ est in | | |
| | | radice cornu borea- | | |
| | | lis γ | 41 | 28 $\frac{1}{2}$ bis |
| 16 | 6 | Stellulam 6 magn. | | |
| | | in radice australis | 40 | 47 $\frac{1}{2}$ |
| | | cornu γ | 40 | 47 |
| 18 | 5 | Sequentem in | | |
| | | australi cornu γ | 37 | 17 bis |
| 41 | 6 | 4 ^{am} in australi cornu | | |
| | | γ extremæ proxi- | 31 | 45 $\frac{1}{2}$ |
| | | mam | 31 | 45 $\frac{3}{4}$ |
| 19 | 3 | Extremam seu sex- | | |
| | | tam in australi | 29 | 48 $\frac{1}{2}$ |
| | | cornu | 29 | 49 |

Declinationes earundem
per Armillas subterraneas

| | | | | |
|----|----|----------------------------|----|------------------|
| 11 | 3 | Stellæ in naribus γ | 14 | 34 $\frac{1}{2}$ |
| 12 | 3 | Secundæ succula- | | |
| | | rum quæ est inter | | |
| | | nares & bor. ocul. | 16 | 30 |
| | | | | vtroq. |
| 15 | 3 | Borealis oculi γ | | |
| | | vno | 18 | 13 |
| | | alt. | 18 | 12 $\frac{1}{2}$ |
| 4 | 4 | Infimæ in inter- | 7 | 32 |
| | | sectione γ | 7 | 32 $\frac{1}{2}$ |
| 3 | 4 | Huic proximæ in | 8 | 15 |
| | | eadem intersectione | 8 | 16 |
| 1 | 5 | Supremæ in inter- | 11 | 29 |
| | | sectione | 11 | 29 $\frac{1}{2}$ |
| 2 | 6 | Inferioris duarum | | |
| | | superiorum in | 9 | 52 |
| | | intersectione | 9 | 53 |
| 8 | 4 | Inferioris dextri vel | | |
| | | præcedentis pedis, | | |
| | | siue eius quæ est in | 4 | 47 |
| | | suffragine siue talo | 4 | 47 $\frac{1}{2}$ |
| .. | .. | Eius quæ est ingenu | | |
| | | dextri vel præced. | 11 | 16 |
| | | pedis | 11 | 15 $\frac{1}{2}$ |
| 13 | 3 | | 14 | 57 |
| | | | 14 | 57 $\frac{1}{2}$ |

DIE 10 JANUARIJ.

| Num. | Mag. | Declinatio | |
|------|------|---|------------------|
| 34 | 6 | Stellulæ præceden- tis talum ☿ | 4 43 4 43½ |
| 5 | 5 | Eius quæ est in recta linea cum suprema in intersectione & dextro genu | 9 49½ 9 50 |
| 7 | 4 | Dextri genu | 7 49½ 7 49 |
| 35 | 6 | Mediæ inter genu fere } dextrum & inferio- rem in sinistro pede | 8 26½ 8 26 |
| 10 | 4 | Inferioris in sinistro vel sequenti pede | 9 14½ vtroq. |
| 9 | 4 | Genu sinistri vel sequentis pedis | 11 38 11 38½ |
| 24 | 5 | Præcedentis in cervice ☿ | 20 52¾ 20 52 |
| 27 | 5 | Superioris duarum præcedentium in quadril. colli ☿ | 27 50 27 51 |
| 26 | 5 | Australis præce- dentium duarum in quadril. colli | 26 26 26 25 |
| 43 | 6 | Paruulæ apud auftra- liorem duarum præ- cedent. in quadri- latero ☿ | 25 20 vtroq. |
| 29 | 5 | Borealioris duarum sequentium in quadril. colli | 26 18 26 19 |
| 28 | 5 | Australioris duarum sequent. in quadri- latero colli | 24 34 24 34½ |
| 37 | 5 | Præcedentis trium quæ sunt apud succulas | 13 44½ 13 43½ |
| 38 | 5 | Mediæ trium vici- narum in succulis ad austrum | 13 56½ 13 55½ |
| 39 | 5 | Postremæ trium apud succulas | 14 58 14 57½ |
| 36 | 6 | Stellulæ ad austrum apud has tres vicinas succu- lis sitæ | 12 5 12 4 |

| | | | |
|---------------------------|---|--|-----------------|
| 20 | 4 | Primæ borealis cornu ☿ | 22 5½ 22 6 |
| 16 | 5 | Primæ australis cornu | 18 6 18 5¾ |
| 18 | 4 | Secundæ in fere } australi cornu ☿ | 20 56½ 20 56 |
| 17 | 6 | Stellulæ paululum fere } ad austrum a 2. in cornu inferiori di- stantis | 19 49 19 49½ |
| 40 | 6 | Tertiæ in australi cornu ☿ | 21 36 21 35 |
| 41 | 6 | Quartæ in australi cornu ☿ | 21 31 21 31¾ |
| 19 | 3 | Extremæ australis cornu | 20 50½ 20 50 |
| 25 | 5 | Sequentis in cervice | 19 32 19 31 |
| 23 | 4 | Australioris in aure | 21 18 21 17 |
| 22 | 4 | Borealioris in aure fere } | 21 49 21 49½ |
| 30 ¹ | 4 | Præcedentis Pleiadum | 22 49 22 48½ |
| 32 | 3 | Lucidæ Pleiadum | 22 46 22 46½ |
| 33 | 4 | Cuspidis Pleiadum siue illius quæ est in termino ad ortum | 22 46 22 46½ |
| Distantiæ per Sextantem. | | | |
| Inter inferius caput II & | | | |
| 37 | 5 | Primam vel præcedentem 3 ^{ium} ad Austr. a succulis | 47 52 bis |
| 38 | 5 | Mediam trium earundem apud succulas | 46 13½ 46 13 |
| 39 | 5 | Postremam trium istarum infra succulas | 44 36½ 44 37 |
| 36 | 5 | Paruulam ad austr. ab istis tribus distantem quæ est in femore ☿ | 48 6 bis |
| 17 | 6 | Illam quæ est infra 2 in australi cornu | 36 37¼ |
| 27 | 5 | Superiorem duarum præcedentium in quadril. colli | 47 34 47 34½ |

¹ Postea adscriptum est: »Videtur non 30 sed 31 Ptolemæi esse«.

| | | | | |
|----|---|-------------------|----|----------------------|
| 43 | 5 | Austral. | | |
| | | duarum præced. in | 48 | 1 |
| | | quadrilatero | 48 | 1 $\frac{1}{4}$ |
| 26 | 6 | Paruulam apud in- | | |
| | | fериorem duarum | | |
| | | præc. in quadr. | 47 | 21 $\frac{1}{2}$ bis |
| 29 | 5 | Borealiorem | | |
| | | duarum sequent. | 44 | 6 $\frac{1}{2}$ |
| | | in quadr. colli | 44 | 6 |
| 28 | 5 | Inferiorem duarum | | |
| | | in quadril. colli | 45 | 1 $\frac{1}{2}$ bis |
| 6 | | Declin. pectoris | 20 | 18 $\frac{1}{2}$ |

DIE 11 JANUARIJ, VESPERI.

| | | | |
|------------------------|--------------|----|------------------|
| Alt. oculi | per Volub. | 49 | 42 $\frac{1}{3}$ |
| | per Chal. | 49 | 42 5" |
| | vel | | $\frac{1}{8}$ |
| Declin. oculi | per Armillas | 15 | 37 $\frac{1}{4}$ |
| | | 15 | 37 $\frac{1}{2}$ |
| Eadem declin. repetita | | 15 | 37 |
| | | 15 | 37 $\frac{1}{2}$ |
| Eadem repetita | | 15 | 37 |
| | | 15 | 37 $\frac{1}{8}$ |
| | vno | 15 | 38 |
| | alt. | 15 | 38 $\frac{1}{4}$ |

DIE 29 JANUARIJ, VESPERI.

| | | | |
|-----------------|-------------|--------------------------|---------------------|
| Alt. mer. oculi | per Vol. | 49 | 41 $\frac{2}{3}$ |
| | per Chalyb. | 49 | 41 55 |
| 40 | 6 | Inter inferius | |
| | | caput II & | |
| | | 4 ^{am} in cornu | 33 31 $\frac{1}{2}$ |
| | | australi | 33 31 $\frac{3}{4}$ |
| 42 | 6 | Declin. paruulæ | |
| | | apud duas australes | |
| | | in intersectione | 7 53 vtr. |
| 6 | 4 | Declin. pectoris | 11 12 $\frac{1}{2}$ |
| | | | 11 13 |

N. B. Declin. oculi hoc anno
15 36 $\frac{1}{2}$ vel $\frac{2}{3}$.

| | | | | |
|----|---|--------------------|----|------------------|
| 13 | 3 | Declin. mediæ | | |
| | | inter nares & | 14 | 53 $\frac{1}{2}$ |
| | | austral. ocul. | 14 | 54 |
| 24 | 5 | Declin. occiden- | | |
| | | tioris duarum in | | |
| | | collo, scilicet in | | |
| | | recta linea cum | | |
| | | Pleiadibus & | 20 | 50 |
| | | boreali oculo | 20 | 50 $\frac{1}{2}$ |

¹ Falsa est hæc declinatio.

DIE 9 FEBRUARIJ, VESPERI.

Obferuabantur denuo stellæ in Aste-
rismo ☿ viceuerfa a lucida ♀.

Num. Inter lucidam ♀ &

| | | | |
|----|----------------------------|----|----------------------|
| 4 | Infirmam quatuor in | | |
| | intersectione ☿ | 23 | 32 $\frac{1}{2}$ bis |
| 3 | Proxime superiorem in | | |
| | intersectione ☿ | 23 | 31 |
| | Repetita | 23 | 30 $\frac{3}{4}$ |
| 1 | Supremam intersectio- | 22 | 28 |
| | nis quæ est num. 1 | 22 | 28 $\frac{1}{6}$ |
| 6 | Pectus ☿ n. 6 | 29 | 3 bis |
| 8 | Pedem ☿ | 32 | 55 $\frac{1}{2}$ |
| | | 32 | 56 |
| 7 | 7 ^{mam} ☿ | 33 | 59 $\frac{1}{4}$ bis |
| 10 | 10 ^{mam} ☿ | 37 | 48 |
| | | 37 | 48 $\frac{1}{4}$ |
| 9 | 9 ^{nam} ☿ | 37 | 24 $\frac{1}{2}$ |
| | | 37 | 25 |
| 30 | Præcedentem inter | 22 | 20 |
| | Pleiades 30 ^{mam} | 22 | 20 $\frac{1}{2}$ |
| 32 | Lucidam in Pleia- | 22 | 54 |
| | dibus 32 | 22 | 54 $\frac{1}{2}$ |
| 33 | Extremam Pleiadum | 23 | 18 $\frac{1}{4}$ bis |
| 24 | Illam in dorso 24 | 27 | 4 $\frac{3}{4}$ |
| | | 27 | 5 |
| 23 | Australiorem in aure ☿ | 31 | 47 |
| | | 31 | 47 $\frac{1}{4}$ |
| 22 | Supremam in aure ☿ | 31 | 54 $\frac{1}{4}$ bis |
| 11 | Os in fucculis | 32 | 8 |
| | | 32 | 8 $\frac{1}{3}$ |
| 12 | Mediam trium | 32 | 16 |
| | superiorum in fucculis | 32 | 16 $\frac{1}{2}$ |
| 15 | Vltimam trium | | |
| | superiorum in fucculis | 33 | 10 $\frac{1}{2}$ bis |
| 13 | | 34 | 4 $\frac{3}{4}$ |
| | | 34 | 5 |
| 20 | Radicem superioris | 35 | 32 $\frac{1}{2}$ |
| | cornu ☿ | 35 | 33 |
| 19 | Extremam inferioris | 48 | 27 |
| | cornu ☿ | 48 | 27 $\frac{1}{4}$ |
| 21 | Supremi cornu | 44 | 41 $\frac{3}{4}$ |
| | extremam | 44 | 42 |

N. B. Circa vltimam obseruationem
fuit altit. lucidæ ♀ circiter 25 partium,
vnde refractio nihil impedimenti po-
terat importare.

Declinationes per Armillas.

| | | | |
|---|-----------------|---|--------|
| 4 | Infirmæ in | 7 | 31 |
| | intersectione ☿ | | vtroq. |

Habuit tunc altitudinem proxime 24 partium. Ergo adhuc erat citra sensibilem refractionem.

| | | |
|----|--|---------------------|
| 3 | Tertiæ ☿ | 8 15 |
| | | 8 15 $\frac{1}{4}$ |
| 1 | Supremæ in interfectione | 11 29 $\frac{1}{2}$ |
| | | 11 29 |
| 8 | | 4 47 |
| | | 4 47 $\frac{1}{4}$ |
| 7 | In genu ☿ | 7 48 $\frac{1}{2}$ |
| | | 7 48 |
| 6 | Pectoris ☿ | 11 14 $\frac{1}{2}$ |
| | | 11 15 |
| 10 | In pede superiori | 9 14 |
| | | 9 14 $\frac{1}{2}$ |
| 9 | In genu superioris pedis | 11 38 |
| | | 11 37 $\frac{3}{4}$ |
| 30 | Occident. termini Pleiadum | 22 45 |
| | | 22 45 $\frac{1}{2}$ |
| 32 | 32 in Pleiadibus habet eandem declin. quam 30. | |
| 33 | Orientalis termini Pleiadum | 22 44 |
| | | vtroq. |
| 24 | In dorso ☿ | 20 53 |
| | | 20 53 $\frac{1}{2}$ |
| 11 | Oris ☿ | 14 34 |
| | | 14 34 $\frac{3}{4}$ |
| 12 | Mediæ trium super. in fuculis | 16 30 $\frac{1}{2}$ |
| | | 16 30 $\frac{3}{4}$ |
| 15 | Borealis oculi ☿ | 18 12 |
| | | 18 12 $\frac{1}{4}$ |
| 13 | In fuculis mediæ inferiorum trium | 14 54 |
| | | 14 54 $\frac{1}{4}$ |
| 23 | Inferioris in aure | 21 15 |
| | | vtroq. |
| 22 | Superioris in aure | 21 49 |
| | | vtroq. |
| 20 | In radice superioris cornu ☿ | 22 6 |
| | | 22 6 $\frac{1}{2}$ |
| 19 | Extremæ infer. cornu | 20 50 |
| | | 20 49 $\frac{1}{2}$ |
| 21 | Extremæ super. cornu | 28 10 $\frac{3}{4}$ |
| | | 28 10 $\frac{1}{2}$ |

DIE 28 OCTOBRIS¹.

| | | |
|----------------------|------------------|-------|
| H.9 29 $\frac{1}{2}$ | Inter oculum ☿ | 33 39 |
| 9 30 $\frac{2}{3}$ | & super. cap. II | 33 39 |

¹ E codice V (inter observationes Saturni).

DIE 23 NOUEMBRIS.

| | | |
|-------------------------------|---|-------------------------|
| 4 | Inter oculum ☿ & infimam in interfectione ☿ | 18 51 |
| | | 18 51 $\frac{1}{2}$ |
| 15 | Inter lucidam ☿ & 15 ☿ | 33 8 $\frac{3}{4}$ bis |
| 31 | Inter boreale cornu ☿ & 31 ☿ | 23 7 |
| | | 23 8 |
| 5 | Inter lucid. ☿ & 5 ☿ | 27 3 bis |
| 16 | Inter lucid. ☿ & 16 ☿ | 38 29 $\frac{1}{4}$ |
| | | 38 29 $\frac{1}{2}$ |
| 18 | Inter lucid. ☿ & 18 ☿ | 40 30 $\frac{1}{2}$ |
| | | 40 31 $\frac{2}{3}$ |
| 17 | Inter lucid. ☿ & 17 ☿ | 41 53 $\frac{1}{2}$ bis |
| 40 | Inter lucid. ☿ & 40 ☿ | 44 9 $\frac{1}{2}$ bis |
| 41 | Inter lucid. ☿ & 41 ☿ | 46 2 $\frac{1}{3}$ |
| | | 46 2 $\frac{2}{3}$ |
| 21 | Inter lucid. ☿ & 21 ☿ | 44 43 |
| | | 44 43 $\frac{2}{3}$ |
| Alt. Merid. oculi ☿ per Chal. | | 49 42 35 |
| per Volub. | | 49 41 $\frac{5}{6}$ |
| per Sext. | | 49 42 |
| Declin. oculi ☿ | | 15 37 |
| | | 15 37 $\frac{1}{3}$ |

DIE 3 DECEMBRIS.

| | |
|----------------------------------|---------------------|
| Inter lucid. ☿ & 39 ☿ | 36 29 |
| | 36 29 $\frac{1}{2}$ |
| 38 ☿ | 35 35 |
| | 35 35 $\frac{2}{3}$ |
| 37 ☿ | 32 2 |
| | 32 2 $\frac{1}{6}$ |
| 25 ☿ | 30 14 $\frac{1}{2}$ |
| | 30 14 $\frac{3}{4}$ |
| 36 ☿ | 35 7 |
| | 35 7 $\frac{1}{2}$ |
| 35 ☿ | 35 34 $\frac{1}{2}$ |
| | 35 35 |
| 34 ☿ | 32 58 |
| | 32 58 $\frac{2}{3}$ |
| 27 ☿ | 27 23 $\frac{1}{3}$ |
| | 27 23 $\frac{1}{4}$ |
| 26 ☿ | 28 10 |
| | 28 11 |
| 43 ☿ | 27 11 $\frac{1}{4}$ |
| | 27 12 |
| 28 ☿ | 30 49 $\frac{1}{2}$ |
| | 30 50 |
| 29 ☿ | 30 15 $\frac{1}{4}$ |
| | 30 16 |
| Declin. occidentalioris Pleiadum | 22 42 $\frac{1}{2}$ |
| | 22 43 |

ASTERISMUS GEMINORUM
SECUNDUM NOSTRAM CÆLITUS FACTAM DENOTATIONEM.



DIE 3 JANUARIJ, VESPERI.

Observatio Asterismi II
per Sextantem Veterem.

Num. in
imagine

Distantia inter oculum ☿ &
πρόποδα II

| | | |
|-------------------|-------------|---------|
| | 21 | 47 bis |
| | repetita 21 | 46½ |
| 2 Plantam pedis | 24 | 3½ |
| | repetita 24 | 4 |
| 3 Calcem pedis | 25 | 53½ bis |
| 4 Sequentem pedem | 27 | 2 |
| | repet. 27 | 2½ |

| | | |
|--------------------------|-----------|-----|
| 6 Infimum siue | 31 | 27 |
| australem | repet. 31 | 27½ |
| pedem | repet. 31 | 28 |
| 9 Boreal. in genu dextro | 31 | 2¼ |
| | repet. 31 | 2½ |
| Mediam trium in genu | 35 | 16½ |
| | 35 | 17 |
| Infimam siue australem | 38 | 47½ |
| in genu australi | 38 | 48 |
| Ventrem inferiorem | 39 | 1 |
| | repet. 39 | 0½ |

| | |
|--|---------------------|
| Brachium supremum | 35 16 |
| repet. | 35 16 $\frac{1}{4}$ |
| 18 Dorsum superius | 40 41 $\frac{1}{2}$ |
| repet. | 40 42 |
| 19 Eam quæ est in humero dextro | 42 50 |
| Infimam versus austrum | 44 39 $\frac{1}{2}$ |
| in sinistro humero | 44 39 |
| repetita | 44 39 $\frac{1}{4}$ |
| Sequuntur nunc earundem præcedentium Declinationes ad ordinem eodem tempore obseruatæ. | |

| | |
|---|---------------------|
| Declin. propodis | |
| per Armillas | 23 12 $\frac{3}{4}$ |
| Plantæ pedis | 22 33 $\frac{3}{4}$ |
| Calcis pedis | 22 39 $\frac{3}{4}$ |
| Sequentis pedis | 20 24 $\frac{1}{2}$ |
| Infimi pedis | 13 16 $\frac{1}{2}$ |
| Borealis in genu dextro | 25 28 |
| Mediæ in genu | 21 7 $\frac{1}{3}$ |
| Infimæ in genu australi | 17 13 $\frac{1}{3}$ |
| Ventris inferioris | 22 41 $\frac{1}{2}$ |
| Brachij supremi | 34 22 $\frac{1}{3}$ |
| 18 Dorsi superioris | 28 33 |
| 19 Eius quæ est in humero dextro | 27 45 |
| 20 Infimæ in cubito sinistro versus austrum | 25 19 $\frac{3}{8}$ |

DIE 9 JANUARIJ, VESPERI.

| | |
|--|---------------------|
| Calx pedis II in Meridie habuit Altit. | |
| per Volub. | 56 44 $\frac{1}{3}$ |
| per Chalyb. | 56 44 |

DIE 11 JANUARIJ, VESPERI.

| | |
|-------------------------------|---------------------|
| Alt. merid. Propodis per Vol. | 57 17 $\frac{1}{4}$ |
| per Chalyb. | 57 17 $\frac{2}{3}$ |
| Declin. eiusdem Propodis | 23 12 $\frac{1}{2}$ |
| | 23 13 |
| Altit. digiti pedis II Merid. | |
| per Chalyb. | 56 38 $\frac{1}{5}$ |
| per Volub. | 56 37 $\frac{1}{2}$ |
| per Mural. | 56 38 |
| alt. pin. | 56 37 $\frac{1}{2}$ |
| Declin. digiti pedis | 22 33 $\frac{1}{2}$ |
| | 22 33 |
| Altit. Calcis II Merid. | |
| per Chalyb. | 56 44 |
| per Volub. | 56 43 $\frac{1}{3}$ |
| per Mural. | 56 44 |

| | |
|------------------------------------|---------------------|
| Declin. Calcis II | 22 40 $\frac{1}{2}$ |
| | 22 40 $\frac{1}{6}$ |
| Alt. 4 II pedis paulo supra lucid. | |
| pedem | |
| per Chalyb. | 54 28 $\frac{2}{3}$ |
| Alt. lucidæ in pede II Merid. | |
| per Chalyb. | 50 46 $\frac{1}{6}$ |
| per Volub. | 50 45 $\frac{1}{3}$ |
| per Sext. | 50 45 $\frac{1}{2}$ |
| Alt. australis pedis II | |
| per Chalyb. | 47 21 $\frac{1}{3}$ |
| per Volub. | 47 21 |

DIE 29 JANUARIJ, VESPERI.

| | |
|----------------------------------|---|
| Altit. Calcis pedis II per Chal. | 56 43 $\frac{2}{3}$ |
| per Mural. | 56 44 |
| Num. Schematis | Mag. |
| 7 | 5 |
| Declinationes | |
| Paruulæ apud Australem | |
| pedem II | 13 37 $\frac{1}{2}$ |
| | alt. 13 38 |
| 10 | 6 |
| | 22 10 $\frac{1}{2}$ |
| | 22 11 $\frac{1}{6}$ |
| 11 | 6 |
| | 24 45 |
| 16 | 4 |
| | Repetita & certa 24 46 |
| | 30 51 vtr. |
| | Altit. superioris capitis II in Meridie |
| | per Chalyb. |
| | 66 46 $\frac{5}{6}$ |
| 19 | 4 |
| | 27 45 |
| | 27 44 $\frac{3}{4}$ |
| 21 | 4 |
| | Stellulæ proximæ superiori capiti |
| | 32 31 vtr. |
| | Alt. merid. infer. capitis II |
| | per Volub. & Chal. |
| | 63 1 $\frac{1}{2}$ |
| | per Mural. |
| | 63 2 $\frac{1}{4}$ |
| | dubia |
| 23 | 5 |
| | Paruulæ inter superius & inferius |
| | 29 47 |
| | caput II |
| | 29 48 |
| 25 | 6 |
| | 27 45 |
| | 27 45 $\frac{2}{3}$ |
| Per Sextantem Veterem | |
| Dist. inter oculum ☿ & | |
| 7 | 6 |
| | 33 39 bis |
| 10 | 6 min. |
| | 32 24 |
| | 32 24 $\frac{1}{2}$ |
| 11 | 6 min. |
| | 35 4 $\frac{2}{3}$ |
| | 35 5 $\frac{1}{3}$ |
| 16 | 4 |
| | 37 58 |
| | 37 58 $\frac{3}{4}$ |

| | | | |
|--|--|----|----------------------|
| 17 | 5 | 39 | 56 |
| | | 39 | 56 $\frac{1}{2}$ |
| 19 | 4 | 42 | 52 |
| | | 42 | 51 $\frac{5}{8}$ |
| 21 | 4 | 42 | 1 $\frac{1}{2}$ |
| | | 42 | 1 |
| 23 | 5 | 44 | 39 $\frac{3}{8}$ |
| | | 44 | 39 |
| DIE 9 FEBRUARIJ. | | | |
| <i>Alt. merid. plantæ pedis</i> II | | | |
| per Chal. | | 56 | 37 35 |
| per Vol. | | 56 | 38 |
| per Mural. | | 56 | 38 0 |
| <i>Declin. eiusdem, vtroque</i> | | | |
| <i>Alt. mer. Calcis pedis</i> | | 22 | 32 $\frac{1}{2}$ |
| per Chal. | | 56 | 43 45 |
| per Vol. | | 56 | 43 10 |
| per Mural. | | 56 | 43 45 |
| <i>Declinatio</i> | | | |
| | | 22 | 39 |
| | | 22 | 39 $\frac{1}{2}$ |
| <i>Pone altit. calcis</i> II | | | |
| <i>Ideoque declinationem</i> | | 56 | 43 45 |
| | | 22 | 38 30 |
| <i>Alt. merid. superioris capitis</i> II | | | |
| per Chalyb. | | 66 | 46 45 |
| per Volub. | | 66 | 47 |
| per Mural. | | 66 | 47 $\frac{3}{4}$ |
| <i>Alt. merid. inferioris capitis</i> II | | | |
| per Chalyb. | | 63 | 1 40 |
| per Volub. | | 63 | 1 30 |
| per Mural. | | 63 | 2 0 |
| <i>Distantiæ eodem Vesperi</i> | | | |
| <i>per Sextantem.</i> | | | |
| 1 | Inter infer. caput & propum pedis II | 23 | 20 bis |
| 2 | Inter infer. caput II & plantam pedis | 21 | 12 bis |
| 3 | Inter cor Ω & calc. ped. II | 54 | 35 bis |
| 4 | Inter cor Ω & inf. pedem superioris II | 53 | 9 $\frac{1}{2}$ |
| | | 53 | 9 $\frac{3}{4}$ |
| 5 | Inter cor Ω & luc. ped. II | 51 | 11 bis |
| 6 | Inter cor Ω & præced. duarum in inf. pede austr. II | 49 | 31 bis |
| 7 | Inter cor Ω & sequent. in eodem pede | 47 | 13 $\frac{1}{2}$ |
| | | 47 | 14 |
| 10 | Inter cor Ω & genu super. II | 49 | 55 $\frac{1}{2}$ bis |
| 12 | Inter cor Ω & femur merid. II | 44 | 46 |
| | | 44 | 46 $\frac{1}{2}$ |
| 13 | Inter cor Ω & clun. infer. II | 41 | 27 bis |

| | | | |
|---|---|----|----------------------|
| 14 | Inter cor Ω & eam quæ est in ventre infer. II | 41 | 21 $\frac{1}{2}$ bis |
| 15 | Inter lucidam ceruicis Ω & supremam manum Bor. II | 47 | 44 bis |
| 16 | Inter lucid. ceruicis Ω & borealem scapulam superior. II | 43 | 40 $\frac{1}{2}$ bis |
| 21 | Inter luc. ceru. Ω & collum superioris II circa aurem 6 mag. | 39 | 59 $\frac{1}{2}$ |
| 22 | Inter luc. ceru. Ω & superius caput | 38 | 47 $\frac{1}{4}$ |
| | | 38 | 47 $\frac{3}{8}$ |
| 18 | Inter cor Ω & inferiorem scapulam Borealis II | 41 | 9 |
| | | 41 | 9 $\frac{1}{4}$ |
| 19 | Inter cor Ω & humerum inferioris II | 38 | 45 $\frac{1}{2}$ |
| | | 38 | 45 |
| 20 | Inter cor Ω & brachium inferioris II | 36 | 15 $\frac{1}{2}$ |
| | | 36 | 15 $\frac{3}{4}$ |
| 25 | Inter cor Ω & manum inferioris II | 34 | 56 |
| | | 34 | 56 $\frac{1}{4}$ |
| 23 | Inter cor Ω & paruulam apud inf. caput II | 37 | 44 |
| | | 37 | 44 $\frac{1}{4}$ |
| 17 | 6 Inter cor Ω & cubitum super. II, 6 mag. | 41 | 2 $\frac{1}{2}$ |
| | | 41 | 2 $\frac{3}{8}$ |
| 10 | 6 Inter cor II & genu infer. II | 47 | 55 $\frac{1}{2}$ |
| | | 47 | 56 |
| 11 | 6 Inter cor Ω & femur vel clun. sup. II | 45 | 40 $\frac{1}{4}$ |
| | | 45 | 41 |
| 24 | Inter cor Ω & inf. cap. II | 37 | 1 bis |
| <i>Declinationes earundem per Armillas.</i> | | | |
| 4 | Propodis II vno | 23 | 12 $\frac{1}{2}$ |
| | Alt. eius 30° alt. | 23 | 13 |
| 4 | 5 Eius quæ est in pede austr. superioris II | 20 | 23 vtr. |
| 5 | 3 Lucidæ in super. mai.) | 16 | 39 |
| | | 16 | 40 |
| 6 | 5 Præced. in austr. pede infer. II | 13 | 14 |
| | | 13 | 15 $\frac{1}{2}$ |
| 7 | 6 Sequentis in austr. pede infer. II | 13 | 37 |
| | | 13 | 38 |
| 9 | 5 Eius quæ est in super. genu bor. II | 25 | 28 |
| | | 25 | 27 |
| 12 | 5) Femoris min.) inferioris II | 21 | 6 |
| | | 21 | 6 $\frac{1}{8}$ |
| 13 | 5 In clune inferior. II | 17 | 13 vtr. |
| 14 | 5 In ventre inferioris II | 22 | 41 $\frac{3}{4}$ |
| | | 22 | 41 $\frac{5}{8}$ |

| | | | | |
|------|---|-----------------------|----|------------------|
| 15 | 5 | In manu | 34 | 23 |
| | | superioris II | 34 | 23 $\frac{1}{2}$ |
| 16 | 6 | In humero | 30 | 51 |
| | | superiori borealis II | 30 | 51 $\frac{1}{4}$ |
| 18 | 5 | In humero | | |
| min. | | inferiori borealis II | 28 | 32 vtr. |
| 19 | 6 | In humero | 27 | 45 |
| | | meridionalis II | 27 | 45 $\frac{1}{2}$ |
| 20 | 5 | In cubito | 25 | 20 |
| | | inferioris II | 25 | 19 $\frac{3}{4}$ |
| 21 | 6 | Apud aurem | 32 | 29 |
| | | superioris II | 32 | 29 $\frac{1}{2}$ |
| 23 | 6 | Apud tempora | 29 | 47 |
| | | inferioris II | 29 | 46 $\frac{3}{4}$ |
| 25 | 6 | In manu | 27 | 45 |
| | | inferioris II | 27 | 46 |
| 17 | 6 | In cubito inferiori | 25 | 47 |
| | | superioris II | 25 | 48 |
| 10 | 6 | Paruulæ in genu | 22 | 10 |
| | | merid. II | 22 | 10 $\frac{1}{2}$ |
| 12 | | N. B. ¹ | 21 | 5 |

DIE 10 FEBRUARIJ.

| | |
|------------------------------------|---------------------|
| Propus II in Merid. habuit Alt. | |
| per Chalyb. | 57 17 |
| per Mural. | 57 17 $\frac{2}{3}$ |
| Planta pedis in Merid. habuit Alt. | |
| per Chalyb. | 56 37 $\frac{2}{3}$ |
| per Volub. | 56 37 $\frac{1}{2}$ |
| per Mural. | 56 37 $\frac{3}{4}$ |
| Calx pedis in Merid. habuit Alt. | |
| per Volub. | 56 43 |
| per Chalyb. | 56 43 $\frac{2}{3}$ |
| per Mural. | 56 43 $\frac{5}{6}$ |
| Inferius caput in Merid. | |
| per Chalyb. | 63 1 $\frac{1}{2}$ |
| per Volub. | 63 1 $\frac{1}{2}$ |

DIE 12 FEBRUARIJ, VESPERI.

| | |
|--------------------------|--------------------------------|
| Alt. merid. pedis II | |
| per min. Portat. | 56 36 $\frac{1}{4}$ |
| per Volub. | 56 37 $\frac{1}{2}$ |
| per Chalyb. | 56 38 $\frac{1}{6}$ |
| | vel 38 |
| per Mural. | 56 38 $\frac{1}{6}$ |
| | vet. pinn. 56 37 $\frac{3}{4}$ |
| Alt. merid. calcis pedis | |
| per Volub. | 56 43 $\frac{1}{4}$ |
| per Q. min. Port. | 56 42 $\frac{1}{2}$ |

¹ Sic in codice D.

| | |
|-------------|--------------------------|
| per Chalyb. | 56 44 |
| | vel. 44 $\frac{1}{6}$ |
| per Mural. | nouo 56 43 $\frac{3}{8}$ |
| | vet. 56 43 $\frac{1}{2}$ |

Luc. Pedis Alt. merid.

| | |
|----------------|---------------------------|
| per Volub. | dubia 50 46 $\frac{2}{3}$ |
| per Port. min. | 50 46 $\frac{1}{2}$ |
| | 50 46 |

DIE 7 MARTIJ.

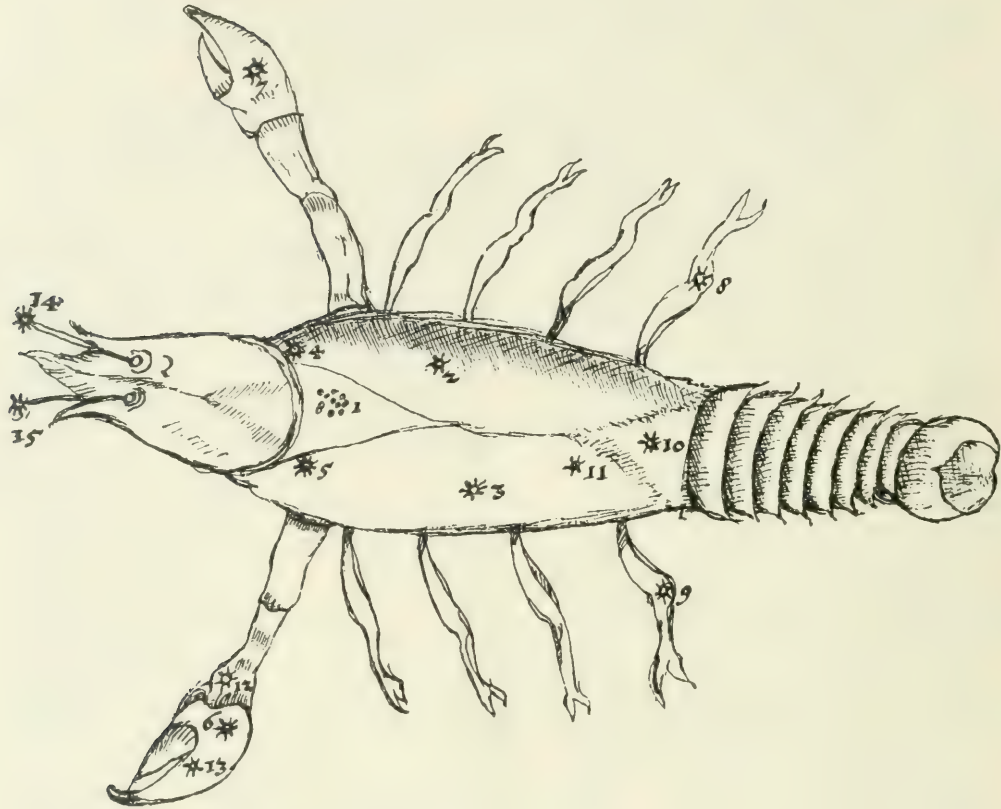
Repetitæ Declinationes stellarum
in II vt sequitur.

| | |
|---|---------------------|
| 25 Propus | 23 12 $\frac{1}{2}$ |
| 14 Planta pedis | 22 32 $\frac{1}{2}$ |
| 15 Calx pedis | 22 38 $\frac{1}{2}$ |
| 16 Quæ est inter calcem & lucid. pedem | 20 23 $\frac{1}{2}$ |
| 17 Lucidus pes | 16 41 |
| 18 Australis pes | 13 16 |
| 19 Sequens in australi pede | 13 37 $\frac{1}{2}$ |
| 10 Borealis in genu dextro | 25 27 $\frac{1}{2}$ |
| 20 | 22 10 |
| 21 | 24 45 $\frac{1}{3}$ |
| 11 | 21 5 $\frac{1}{2}$ |
| 13 Quæ in imis natibus | 17 13 |
| 12 | 22 40 |
| 3 | 34 22 $\frac{1}{2}$ |
| 4 | 30 51 |
| 8 | 25 47 $\frac{1}{3}$ |
| 5 | 28 32 $\frac{1}{2}$ |
| 6 | 27 44 |
| 7 | 25 19 $\frac{1}{3}$ |
| 24 | 32 30 |
| 2 Superius caput II | 32 41 $\frac{1}{2}$ |
| 1 | 29 47 |
| Inferius caput II | 28 56 $\frac{1}{3}$ |
| 22 | 27 45 $\frac{1}{2}$ |

DIE 3 DECEMBRIS, NOCTU.

| | |
|---|---------------------|
| Inter oculum ♂ & 24 II | 42 0 bis |
| Inter Aldeb. & 4 II | 37 58 $\frac{1}{4}$ |
| | 37 56 $\frac{5}{6}$ |
| Inter Aldeb. & 22 II | 46 45 $\frac{1}{4}$ |
| | 46 46 |
| Inter Aldeb. & 9 II | 39 55 |
| | 39 56 |
| Inter Aldeb. & supremum brachium II, 4 | 35 16 |
| | 35 15 $\frac{1}{2}$ |
| Inter infer. cap. II & 17, scilicet lucid. ped. II | 19 30 bis |

ASTERISMUS CANCRI.
SECUNDUM NOSTRAM DESIGNATIONEM.



| DIE 29 JANUARIJ, VESPERI. | | | | | | | | | |
|---------------------------|-------|-------------------------|----|------------------------------------|----|---|------------------|----|--------------------------------|
| Num. figura- tionis | Magn. | Distantia inter cor ♂ & | | | | | | | |
| 10 | 5 | Caudam ♂ | 28 | 39 bis | 7 | 4 | Eam quæ est in | 25 | 24 |
| 11 | 6 | Sequentem in | 26 | 7 | 12 | 5 | branca boreali | 25 | 24 ³ / ₄ |
| min. | } | cauda ♂ | 26 | 7 ¹ / ₂ | | | Superiorem trium | 17 | 38 |
| | | Australiorem duarum | | | 6 | 4 | in austr. branca | 17 | 38 ³ / ₄ |
| 3 | 6 | præced. in □ ♂ | 24 | 10 ³ / ₄ bis | | | sive forfice | 17 | 8 |
| 2 | 6 | Borealior. duarum | 24 | 29 ¹ / ₄ | | | Mediam trium in | 17 | 8 ¹ / ₄ |
| 1 | neb. | præcedent. in □ ♂ | 24 | 29 ¹ / ₄ | 13 | 5 | australi branca | 14 | 54 ¹ / ₄ |
| | | Præsepe ♂ | 22 | 31 ¹ / ₄ | | | australi branca | 14 | 54 ² / ₃ |
| 4 | 5 | Asellum bor. | 22 | 30 | 14 | 6 | Superiorem in | 19 | 58 ¹ / ₂ |
| 5 | 4 | Asellum austral. | 22 | 29 ¹ / ₂ | | | rostro ♂ | 19 | 58 |
| | | | 21 | 7 ¹ / ₄ bis | 15 | | Inferiorem in | 17 | 21 ¹ / ₂ |
| | | | | | | | rostro ♂ | 17 | 21 ¹ / ₄ |
| | | | | | 8 | 5 | Borealem | 30 | 21 |
| | | | | | | | pedem ♂ | 30 | 22 |

| | | | | |
|---|---|-----------|----|-----------------|
| 9 | 5 | Auftralem | 30 | 6 |
| | | pedem ☉ | 30 | 6 $\frac{3}{4}$ |

Declinationes stellarum
Afterismi ☉

| | | | | |
|------|------|----------------------|----|------------------|
| 8 | 5 | Borealis pedis ☉ | 22 | 40 |
| | | altero pin. | 22 | 39 |
| 9 | 5 | Auftralis pedis | 14 | 14 |
| | | | 14 | 15 |
| 10 | 4 | Eius quæ est in | 18 | 49 |
| | | cauda lucidior | 18 | 49 $\frac{5}{6}$ |
| 11 | 6 | Alterius in cauda | 19 | 33 |
| min. | | seu potius in dorso | 19 | 34 $\frac{1}{2}$ |
| 2 | 6 | Borealis duarum | 21 | 46 $\frac{1}{2}$ |
| | | præced. in ☐ ☉ | 21 | 47 |
| 3 | 6 | Auftralis præce- | 19 | 26 |
| | | dentis in ☐ ☉ | 19 | 27 |
| 1 | neb. | Præsepis ☉ | 21 | 4 |
| | | | 21 | 4 $\frac{1}{2}$ |
| 4 | 5 | Afelli borealis | 22 | 54 vtr. |
| 5 | 4 | Afelli auftralis | 19 | 37 |
| mai. | | | | |
| 7 | 4 | Branchæ Borealis | 30 | 13 $\frac{1}{2}$ |
| | | | 30 | 13 |
| 12 | 5 | Borealis trium in | 16 | 50 $\frac{1}{2}$ |
| | | Brancha auftr. | 16 | 50 |
| 6 | 4 | Mediæ trium & | 13 | 24 $\frac{1}{2}$ |
| mai. | | lucidioris in auftr. | | |
| | | brancha. | 13 | 23 $\frac{1}{2}$ |
| 13 | 5 | Infimæ trium | 12 | 17 |
| mai. | | Branch. siue for- | | |
| | | ficis auftr. | 12 | 16 |
| 14 | 6 | Borealis duarum | 26 | 1 |
| | | in rostro | 26 | 1 $\frac{1}{2}$ |
| 15 | 6 | Auftralis duarum | 23 | 37 |
| | | in rostro | 23 | 37 $\frac{1}{2}$ |

DIE 10 FEBRUARIJ.

Repetitæ Declinationes stellarum
☉ quotquot videri poterant ☿ splen-

Num.

| | | | |
|----|-----------------------|----|------------------|
| 10 | Eius quæ est in cauda | 18 | 50 |
| | lucidior | 18 | 50 $\frac{1}{3}$ |
| 5 | Afelli auftralis | 19 | 37 $\frac{1}{2}$ |
| | | 19 | 38 |
| 4 | Afelli Borealis | 22 | 54 $\frac{1}{2}$ |
| | | 22 | 54 $\frac{1}{6}$ |

| | | | |
|----|---------------------------|----|------------------|
| 1 | Præsepis (dubiæ | 21 | 3 $\frac{1}{2}$ |
| | propter ☿) | 21 | 5 |
| 7 | Branchæ borealis | 30 | 13 $\frac{1}{2}$ |
| | | 30 | 14 |
| 6 | Mediæ & lucidioris | 13 | 24 $\frac{1}{4}$ |
| | trium in brancha auftrali | 13 | 24 $\frac{1}{2}$ |
| 13 | Infimæ trium in | 12 | 17 $\frac{1}{3}$ |
| | brancha auftrali | 12 | 18 |

Plures stellæ in ☉ quoad declinatio-
nes hoc vesperi obseruari non pote-
rant, ob ☿ nouam suo lumine stellâs
alias per se tenues offuscantem. Pos-
sunt itaque hæ declinationes aliquan-
do ☿ latente repeti, quamuis per se sint
mediocres.

Vice versa a lucida pedis ☿ per
Sextantem nouum.

| | | | |
|----|-----------------------|----|----------------------|
| 10 | Inter luc. ped. ☿ & | 22 | 37 $\frac{1}{4}$ |
| | lucid. caudæ ☉ repet. | 22 | 37 $\frac{1}{2}$ |
| 5 | Afellum auftralem | 30 | 18 $\frac{1}{2}$ |
| | | 30 | 19 |
| 4 | Afellum borealem | 30 | 5 bis |
| 7 | Brancham borealem | 32 | 5 $\frac{1}{2}$ |
| | | 32 | 5 $\frac{2}{3}$ |
| 6 | Brancham auftralem | 34 | 22 $\frac{1}{2}$ bis |
| 13 | Infimam trium in | 36 | 52 |
| | brancha auftrali | 36 | 51 $\frac{5}{6}$ |

DIE 3 DECEMBRIS.

| | | | |
|----|--------------------------|----|----------------------|
| 7 | Inter lucidam pedis ☿ & | 32 | 5 |
| | Supremam brancham | 32 | 6 |
| 14 | Inter luc. ped. ☿ & 14 ☉ | 34 | 49 |
| | | 34 | 50 |
| 15 | Inter luc. ped. ☿ & 15 ☉ | 29 | 8 $\frac{1}{4}$ bis |
| 1 | Inter Præsepe ☉ & | 29 | 16 $\frac{1}{4}$ |
| | luc. ped. ☿ | 29 | 18 $\frac{1}{4}$ |
| | | 29 | 18 |
| 5 | Inter luc. ped. ☿ & | 30 | 18 $\frac{3}{4}$ |
| | afellum auftr. | 30 | 19 |
| 12 | | 33 | 30 |
| | | 33 | 31 |
| 2 | | 27 | 31 |
| | | 27 | 32 |
| 3 | | 27 | 14 |
| | | 27 | 15 $\frac{1}{4}$ |
| 8 | | 21 | 53 $\frac{3}{4}$ |
| | | 21 | 55 |
| 9 | | 22 | 35 $\frac{1}{3}$ bis |

ASTERISMUS LEONIS IUXTA NOSTRAM DENOTATIONEM.



DIE 29 JANUARIJ, VESPERI.

H. 12 30' pro Horologio. Altitudo maxima cordis Ω
per Volub. 48 $2\frac{1}{2}$
per Chalyb. 48 $2\frac{1}{4}$

DIE 10 FEBRUARIJ.

Distantiæ per Sextantem
Trigonikum nouum.

| Num. | Mag. | Inter inferius caput Π & | |
|------|------|--|--|
| 1 | 4 | 1 Ω in naribus | 22 3 22 $2\frac{3}{4}$ |
| 2 | 4 | 2 in ore | 24 23 24 $23\frac{1}{2}$ |
| 4 | 3 | 4 in cap. auf. | 27 $16\frac{5}{6}$ 27 17 |
| 3 | 4 | 3 in cap. boreal. | 28 $18\frac{1}{2}$ 28 $18\frac{3}{4}$ |
| 5 | 3 | 5 in collo, trium boream | 34 11 bis |
| 6 | 2 | 6 med. colli lucid. | 35 59 35 $58\frac{5}{6}$ |
| 7 | 3 | Inter canem minorem & 7 infimam trium in collo | 37 58 bis |

| | | | |
|----------------------------|---|--------------------------------------|--|
| 8 | 1 | 8 cor Ω | 37 20 bis |
| 13 | 4 | 13 in pede Ω | 30 25 30 $25\frac{1}{6}$ |
| 15 | 4 | 15 in sinistra axilla | 43 5 43 $5\frac{1}{6}$ |
| 23 | 3 | 23 in femore posteriori | 55 41 55 $41\frac{1}{3}$ |
| 22 | 3 | 22 in clune auf. | 53 34 53 $34\frac{1}{2}$ |
| 20 | 2 | 20 in lumbis lucidam | 54 $5\frac{1}{4}$ 54 6 |
| 19 | 4 | 19 præced. in lumbis | 51 $20\frac{1}{4}$ 51 $20\frac{1}{2}$ |
| 9 | 5 | 9 infra cor supra pectus | 37 0 bis 24 37 |
| 27 | 2 | Inter cor & caudam Ω , 8 & 27 | 24 $37\frac{1}{2}$ |
| Declinationes per Armillas | | | |
| 1 | | Eius quæ est in naribus B. | 27 $54\frac{1}{2}$ vetroq. |
| 2 | | Oris | 24 45 24 $45\frac{1}{4}$ |
| 4 | | Australioris in capite | 25 38 25 $38\frac{1}{4}$ |

| | | |
|----|---------------------|---------------------|
| 3 | Borealis in capite | 27 55 $\frac{1}{2}$ |
| | | 27 55 |
| 13 | In pede anteriori | 11 43 $\frac{1}{2}$ |
| | | 11 43 $\frac{3}{4}$ |
| 9 | Infra cor Ω | 12 0 $\frac{1}{2}$ |
| | | vtroq. |
| 19 | 5 Præcedentis in | 22 22 $\frac{1}{3}$ |
| | lumbis | 22 23 |
| 15 | In sinistra axilla | 11 24 |
| | | 11 23 $\frac{3}{4}$ |
| 7 | Infimæ trium in | 18 44 $\frac{3}{4}$ |
| | collo | 18 44 $\frac{5}{6}$ |
| 6 | Lucidæ ceruicis | 21 53 $\frac{1}{2}$ |
| | vel mediæ colli | 21 54 |
| 5 | Supremæ in collo | 25 26 |
| | | 25 26 $\frac{1}{3}$ |
| 20 | Coxendicis vel in | 22 47 |
| | lumbis lucidæ | vtroq. |
| 22 | 3 In clune australi | 17 41 |
| | | 17 41 $\frac{1}{4}$ |
| 23 | 3 In posteriori | 12 48 |
| | femore | 12 48 $\frac{1}{2}$ |
| 27 | Extremæ caudæ | 16 53 |
| | | 16 52 $\frac{1}{2}$ |

DIE 12 FEBRUARIJ, MANE.

| | | | |
|----|---|-------------------------|-------------------------|
| | | Inter caudam Ω & | |
| 13 | 3 | 13 in genu sinistro | 32 22 |
| | | repetita | 32 22 $\frac{1}{2}$ |
| 9 | 4 | 9 super pectus | |
| | | infra cor Ω | 26 50 $\frac{1}{3}$ bis |
| 10 | 4 | | 28 55 |
| | | | 28 55 $\frac{2}{3}$ |
| 12 | 4 | | 34 24 $\frac{1}{2}$ |
| | | | 34 25 |
| 14 | 4 | 14 siue quæ est in | 28 32 |
| | | drace sin. priori | 28 32 $\frac{1}{4}$ |
| 1 | 4 | Primam in | 36 19 $\frac{1}{2}$ |
| | | naribus | 36 20 |
| 2 | 4 | 2 in ore | 34 28 $\frac{3}{4}$ |
| | | | 34 28 $\frac{5}{6}$ |
| 4 | 3 | 4 australiorem | 30 31 |
| | | in capite Ω | 30 31 $\frac{1}{2}$ |
| 3 | 4 | 3 in capite | |
| | | boream | 29 30 $\frac{1}{4}$ bis |
| 15 | 4 | Inter Spicam & | 47 31 $\frac{1}{2}$ |
| | | 15 Ω | 47 31 $\frac{5}{6}$ |
| 18 | | Inter Spicam & | 44 25 |
| | | 18 Ω | 44 25 $\frac{3}{4}$ |

| | | |
|----|----------------------------|---------------------|
| 17 | Inter Spicam & | 46 47 |
| | 17 Ω | 46 48 |
| 16 | Inter Spicam & | 49 46 |
| | 16 Ω | 49 46 $\frac{3}{4}$ |
| 32 | 5 Inter Spicam & eam | |
| | quæ est sub ventre | |
| | Ω , nobis num. 32 & | |
| | est duarum | 39 49 $\frac{1}{4}$ |
| | australior | 39 50 |
| 31 | 4 Inter Spicam & eam | |
| | sub ventre Ω bor., | 39 27 |
| | num. 31 | 39 26 |

N. B. Has duas stellas veteres non numerant, etsi commode possent includi in figura.

| | | |
|------|------------------------------|-------------------------|
| 24 | 4 Inter Spicam & | 35 20 |
| | 24 Ω in pede Ω | 35 20 $\frac{1}{4}$ |
| 23 | 4 Inter Spicam & | 37 8 |
| | 23 in femore Ω | 37 8 $\frac{3}{4}$ |
| 8 | 1 } Inter Spicam & | |
| min. | cor Ω | 54 2 |
| 7 | 3 Inter Vindemiator. | |
| | & 7 Ω | 42 47 $\frac{1}{4}$ bis |
| 6 | 2 Inter Vindemiato- | 40 2 $\frac{5}{6}$ |
| | rem & 6 Ω | 40 3 $\frac{1}{4}$ |
| 5 | 3 Inter Vindemiato- | |
| | rem & supremam | 41 19 $\frac{1}{2}$ |
| | ceruicis | 41 19 |

Declinationes per Armillas.

| | | |
|----|------------------------------|--------------------------|
| 13 | Eius quæ est in pedibus | 11 43 $\frac{1}{2}$ |
| | anterioribus lucidior | |
| | | alt. 11 43 $\frac{3}{4}$ |
| 1 | Quæ in naribus | 27 54 |
| | | 27 55 |
| 2 | Eius quæ est in ore Ω | 24 45 |
| | | 24 44 $\frac{1}{2}$ |
| 4 | Inferioris in capite | 25 37 $\frac{1}{2}$ |
| | | 25 38 |
| 3 | Superioris in capite | 27 54 |
| | | 27 54 $\frac{2}{3}$ |
| 20 | Sequentis in lumbis | 22 46 |
| | | 22 46 $\frac{1}{3}$ |
| 6 | Lucidæ ceruicis Ω | 21 53 |
| | | 21 53 $\frac{1}{2}$ |

Sequitur iterum obseruatio
in distantijs

| | |
|-----------------------|---------------------|
| Inter Vindemiatozem & | |
| Informem supra | 35 16 |
| dorsum Ω | 35 16 $\frac{1}{8}$ |

| | | | |
|----|--------|----|----------------------|
| 19 | | 30 | 18 $\frac{1}{2}$ |
| | | 30 | 19 |
| 20 | 2 | 27 | 43 $\frac{1}{2}$ bis |
| 22 | | 26 | 38 bis |
| 27 | 2 mai. | 18 | 10 |
| | | 18 | 10 $\frac{1}{6}$ |

DIE 13 FEBRUARIJ.

| Mane. | Inter nubes. |
|-----------|---|
| Num. Fig. | Declinatio |
| 13 | Eius quæ est in pedibus 11 44 |
| | anterior. lucidior 11 44 $\frac{1}{2}$ |
| 4 | |
| | alt. pin. 25 39 |
| 6 | Lucidæ ceruicis 21 53 $\frac{1}{2}$ |
| | 21 53 $\frac{3}{4}$ |
| 5 | Supremæ in collo 25 26 $\frac{1}{4}$ |
| | 25 26 $\frac{1}{4}$ |
| 20 | Lucidæ 22 47 $\frac{1}{2}$ |
| | in sup. lumbis 22 47 $\frac{1}{2}$ |
| 7 | Infimæ trium in collo 18 45 |
| | 18 44 $\frac{3}{4}$ |
| 22 | Australis in verteb. 17 41 vtr. |
| 15 | Eius in axilla sinistra 11 23 $\frac{1}{2}$ |
| | 11 24 |
| 23 | Eius quæ est in posterior. cruribus 12 48 |
| | vtroq. |
| 27 | Lucidæ in cauda 16 52 $\frac{1}{2}$ |
| | 16 53 |
| 19 | Præcedentis duarum 22 22 |
| | in lumbis 22 21 $\frac{3}{4}$ |

DIE 10 MARTIJ, VESPERI.

| | |
|-----------------------------|--------------------|
| Alt. Cordis Ω Merid. | |
| per Chalyb. | 48 2 $\frac{1}{2}$ |
| per Volub. | 48 2 $\frac{3}{4}$ |
| per Sext. | 48 1 $\frac{1}{2}$ |
| Non erat satis ferenum. | |

DIE 13 MARTIJ, VESPERI.

| | |
|-------------------------------------|---------------------|
| Alt. Merid. | |
| præcedentis lucidæ in pede Ω | |
| per Chalyb. | 45 49 |
| per Sext. | 45 48 $\frac{5}{6}$ |
| Alt. Merid. lucid. cap. Ω | |
| per Chal. | 59 43 $\frac{1}{6}$ |
| Alt. Merid. Cordis Ω | |
| per Chal. | 48 2 5" |
| per Sext. | 48 2 0 |
| per Volub. | 48 2 20 |

DIE 15 MARTIJ, VESPERI.

| | |
|-----------------------------|--------------------|
| Alt. Merid. Cordis Ω | |
| per Chalyb. | 48 2 25 |
| per Volub. | 48 2 0 |
| per Q. min. azim. | 48 0 $\frac{1}{2}$ |
| per Mural. | 48 2 $\frac{1}{2}$ |
| | 48 2 $\frac{3}{4}$ |

| | |
|---------------------------|---------------------|
| Alt. Merid. Luc. Ceruicis | |
| per Muralem veteri | 55 59 $\frac{2}{3}$ |
| nouo | 56 0 |

DIE 22 MARTIJ, VESPERI.

| | |
|--------------------------------------|---------------------|
| Alt. Merid. Cordis Ω | |
| per Chalyb. & Volub. | 48 2 |
| Alt. Merid. lucid. in collo Ω | |
| per Chal. | 55 59 |
| per Vol. | 55 58 $\frac{3}{4}$ |

DIE 24 MARTIJ.

| | |
|----------------------------------|---------------------|
| Alt. Merid. Cordis Ω | |
| per Chalyb. | 48 2 |
| per Volub. | 48 2 |
| Alt. Mer. Luc. in collo Ω | |
| per Chalyb. | 55 58 $\frac{5}{6}$ |
| per Volub. | 55 59 |

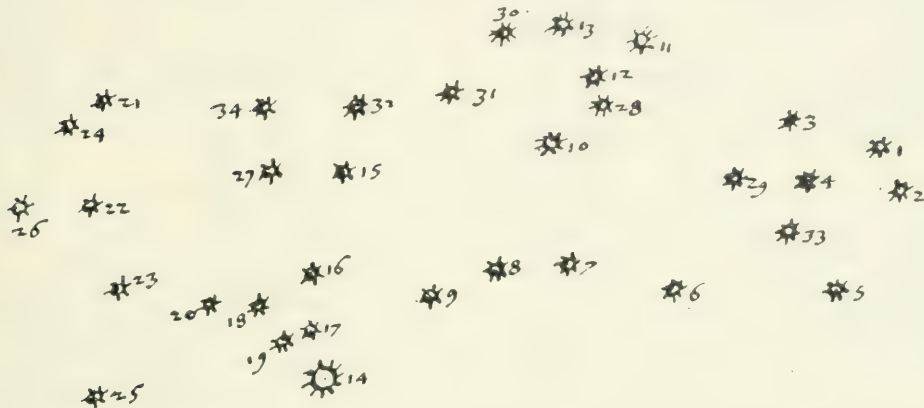
DIE 8 APRILIS, VESPERI.

| Num. | Mag. | Declinatio |
|------|--------|---|
| 12 | 5 | Superioris trium in præced. pede Ω 13 5 |
| 28 | 6 | Mediæ in pede anteriori 11 23 $\frac{1}{2}$ |
| 29 | 6 | Infimæ eiusdem pedis ¹ 10 33 $\frac{1}{2}$ |
| 10 | 6 | Parum ante- vno 14 22 $\frac{1}{2}$ |
| | | cedentis cor Ω alt. 14 22 |
| 14 | 5 | Eius in genu sinistro 9 59 |
| | | 10 0 |
| 9 | 4 | Eius quæ est infra cor Ω 12 1 |
| | | 12 0 $\frac{1}{2}$ |
| 16 | 6 min. | 16 12 $\frac{1}{2}$ |
| | | 16 12 |
| 17 | 6 | 16 22 |
| | | 16 21 $\frac{1}{4}$ |
| 18 | 6 | 12 44 |
| | | 12 43 $\frac{1}{2}$ |
| 30 | 6 | 21 2 |
| | | 21 1 $\frac{1}{2}$ |

¹ Decl. falsa est. Debet esse circiter 10° 48'.

| | | | | | | |
|----|---|---------------------|----|---|------------------------|---------------------|
| 19 | 5 | 22 22 | 20 | 1 | Superioris in dorfo | 22 47 bis |
| 31 | 6 | 22 22 $\frac{1}{2}$ | 22 | 2 | | 17 40 $\frac{1}{2}$ |
| | | 8 16 $\frac{1}{2}$ | | | | 17 40 $\frac{3}{4}$ |
| 32 | 6 | 8 17 | 23 | 3 | Eius quæ est in femore | 12 48 |
| | | 5 49 | | | | 12 47 $\frac{1}{2}$ |
| | | 5 50 | 27 | 1 | Caudæ Ω | 16 53 |
| 24 | 3 | 8 15 | | | | 16 53 $\frac{1}{4}$ |
| | | 8 15 $\frac{1}{2}$ | | | | |

ASTERISMUS VIRGINIS IUXTA NOSTRAM DENOTATIONEM.



DIE 7 JANUARIJ, MANE.

| | | | |
|--|----|------------------|-----|
| Alt. Merid. Spicæ \mathbb{M} bonæ | | | |
| per Chalyb. | 25 | 8 | 0 |
| per Volub. | 25 | 7 | 50 |
| per Sext. | 25 | 7 | 55 |
| per Mural., vtroq. | 25 | 7 | 50 |
| Declin. Spicæ vno | 8 | 57 | 30 |
| per Armillas alt. | 8 | 57 | 20 |
| Inter Spicam & borealiorem in capite \mathbb{M} | 31 | 31 $\frac{1}{2}$ | bis |
| Inter Spicam & australiorem in capite \mathbb{M} | 30 | 24 $\frac{1}{4}$ | |
| Inter Spicam & australiorem in capite \mathbb{M} | 30 | 24 $\frac{1}{3}$ | |
| Inter Spicam & australiorem in vultu \mathbb{M} | 27 | 29 $\frac{2}{3}$ | |
| Declin. australioris in vultu \mathbb{M} B. | 8 | 53 $\frac{1}{2}$ | |
| | 8 | 54 | |
| Decl. genæ seu Bor. in vultu | 11 | 5 B. bis | |
| Inter Spicam & Genam \mathbb{M} Bor. | 28 | 5 $\frac{1}{6}$ | |
| Inter 1 alæ auftr. & Spicam | 26 | 53 $\frac{1}{3}$ | |
| | 26 | 53 $\frac{1}{3}$ | |

| | | |
|---|----|------------------|
| Declin. australioris in capite \mathbb{M} alt. | 8 | 48 $\frac{1}{2}$ |
| Dift. inter 2 australis alæ \mathbb{M} & Spicam | 19 | 18 $\frac{1}{2}$ |
| Decl. Boreal. in capite, dubia | 10 | 40 |
| Dift. inter 3 Australis alæ num. 7 & Spicam | 14 | 29 $\frac{1}{4}$ |
| Alt. Merid. Vindemiat. per Volub. & Chalyb. | 47 | 17 $\frac{1}{3}$ |

DIE 12 FEBRUARIJ, MANE.

| | | |
|--|----|-----------------|
| Spicæ \mathbb{M} Alt. Mer. per Chal. | 25 | 8 $\frac{1}{4}$ |
| per Volub. | 25 | 7 $\frac{1}{2}$ |
| per Sext. | 25 | 7 $\frac{2}{3}$ |
| per Mural., vet. altero | 25 | 7 $\frac{5}{6}$ |
| | 25 | 8 |

DIE 13 FEBRUARIJ, MANE.

| | | |
|--|----|-----------------|
| Spicæ \mathbb{M} Alt. Mer. per Chal. | 25 | 8 $\frac{1}{6}$ |
| per Q. minim. portatilem | 25 | 8 |
| per Sextantem veterem | 25 | 8 |
| Non erat satis serenum. | | |

DIE 11 MARTIJ.

Noctu ante meridiem.

Alt. Merid. Spicæ per Chal. 25 8
 Num. imaginis ex Arato per Sext. 25 7 $\frac{3}{4}$

Inter cor Ω &

| | | | |
|-----------------|--|----|---------------------|
| 1 | Borealem duarum præcedentium in \square capitis \mathfrak{M} | 24 | 4 $\frac{1}{4}$ bis |
| 2 | Sequentem meridionalem in \square capitis \mathfrak{M} | 24 | 35 $\frac{1}{4}$ |
| 4 | Meridional. inferiorum in \square capitis | 24 | 35 $\frac{2}{3}$ |
| 3 | Supremam sequentium in \square cap. | 28 | 11 $\frac{1}{6}$ |
| 5 | Eam quæ est in australi ala | 28 | 52 $\frac{3}{4}$ |
| 33 | Stellulam 5 magnitudinis (ita est inter 4 ^{am} & 5 ^{am} \mathfrak{M}) | 27 | 13 |
| 28 ¹ | | 27 | 13 $\frac{1}{2}$ |
| 6 | Secundam in austr. alarum lucidiorum (4 mag.) | 23 | 46 $\frac{3}{4}$ |
| 7 | Tertiam in australi ala \mathfrak{M} | 34 | 59 |
| 10 | Cingulum \mathfrak{M} | 34 | 59 $\frac{1}{2}$ |
| 13 | Vindemiatores | 40 | 21 $\frac{3}{4}$ |
| 11 | | 40 | 22 |
| 12 | | 42 | 16 $\frac{1}{4}$ |
| 28 | | 42 | 16 $\frac{1}{2}$ |
| | | 42 | 32 bis |
| | | 37 | 36 |
| | | 37 | 36 $\frac{1}{2}$ |
| | | 38 | 56 $\frac{1}{2}$ |
| | | 38 | 57 |
| | | 38 | 10 |
| | | 38 | 10 $\frac{3}{4}$ |

Inter caudam Ω &

| | | | |
|----|---|----|------------------|
| 30 | | 22 | 0 |
| 31 | 6 magn. | 23 | 33 |
| 32 | | 23 | 33 $\frac{2}{3}$ |
| 15 | Eam quæ est in dextro femore \mathfrak{M} | 28 | 1 |
| 16 | | 28 | 1 $\frac{3}{4}$ |
| 9 | | 30 | 11 |
| 25 | Eam quæ est in australi pede \mathfrak{M} | 30 | 11 $\frac{1}{2}$ |
| | | 32 | 51 $\frac{1}{4}$ |
| | | 32 | 51 $\frac{2}{3}$ |
| | | 28 | 20 $\frac{3}{4}$ |
| | | 28 | 21 |
| | | 46 | 25 |
| | | 46 | 26 |

| | | | |
|----|--|----|----------------------|
| 23 | Illam quæ est in fimbria \mathfrak{M} paulo supra austr. pedem | 43 | 22 $\frac{3}{4}$ |
| 22 | Eam quæ est in fimbria magis ad boream | 43 | 23 |
| 26 | Borealem pedem \mathfrak{M} | 41 | 42 $\frac{1}{2}$ bis |
| | | 47 | 31 $\frac{1}{2}$ |
| | | 47 | 32 |

DIE 12 MARTIJ, MANE.

Inter Vindemiatores & lucidas ceruicis Ω 40 1 $\frac{5}{8}$ bis

DIE 14 MARTIJ, MANE.

| Num. | Mag. | Inter borealem lancem Ω & | |
|------|------|--|-------------------------|
| 1 | | Superiorem in cap. \mathfrak{M} | 55 36 $\frac{1}{2}$ |
| 2 | | Australiorem in capite \mathfrak{M} | 55 36 $\frac{3}{4}$ |
| 4 | | Australiorem in facie \mathfrak{M} | 55 0 |
| 3 | | Borealiorem in facie \mathfrak{M} | 54 59 $\frac{1}{2}$ |
| 5 | 3 | Eam quæ est in extremitate australis alæ \mathfrak{M} | 51 25 |
| 6 | 3 | Præcedentem de quatuor quæ sunt in ipsa ala | 51 25 $\frac{1}{3}$ |
| 7 | 3 | Eam quæ ipsam sequitur in ala | 51 2 $\frac{1}{4}$ |
| 9 | 5 | Tertiam in ipsa ala | 51 2 $\frac{3}{4}$ |
| 16 | 4 | Vltimam de quatuor illis quæ sunt in ala \mathfrak{M} australi siue extremam omnium alæ istius | 52 40 $\frac{1}{2}$ bis |
| 33 | 5 | Eam quæ est in collo \mathfrak{M} | 26 13 |
| 10 | 3 | Cingulum | 26 13 $\frac{3}{4}$ |
| 29 | 6 | | 50 49 |
| 28 | 6 | | 50 49 $\frac{1}{4}$ |
| 11 | | | 37 26 |
| 12 | | | 37 26 $\frac{1}{2}$ |
| | | | 48 57 |
| | | | 48 57 $\frac{3}{4}$ |
| | | | 45 47 $\frac{1}{2}$ |
| | | | 45 47 $\frac{1}{4}$ |
| | | | 43 18 $\frac{1}{3}$ |
| | | | 43 18 $\frac{1}{2}$ |
| | | | 41 21 $\frac{1}{2}$ |
| | | | 41 22 |

¹ Non est stella, quam Tycho 28 vocat, sed stellula ω Virginis.

| | | |
|-----------------|--|-------------------------|
| 29 ¹ | | 41 51 $\frac{1}{2}$ |
| | | 41 52 $\frac{1}{4}$ |
| 13 | Vindemiatores | 39 9 |
| | | 39 9 $\frac{1}{6}$ |
| 30 | | 35 17 $\frac{1}{2}$ |
| | | 35 17 $\frac{3}{4}$ |
| 31 | | 33 16 |
| | | 33 15 $\frac{1}{2}$ |
| 32 | | 28 45 bis |
| 8 6 } | | 34 35 |
| min. } | | 34 36 |
| 19 | | 25 39 |
| | | 25 40 |
| 18 | | 23 34 |
| | | 23 33 |
| 15 3 | Eam quæ est iuxta vertebram, vmbili- cum | 26 57 |
| | | 26 56 $\frac{3}{4}$ |
| 21 ² | | 21 54 |
| | | 21 54 $\frac{1}{2}$ |
| 34 5 | | 21 43 $\frac{3}{4}$ bis |
| ... | | 15 51 |
| | | 15 51 $\frac{1}{4}$ |

Declinationes stellarum in \mathbb{M}

| | | |
|---|---|--------------------------|
| 1 | Borealis præcedent. | 10 32 $\frac{1}{2}$ B. |
| | in \square cap. \mathbb{M} | alt. 10 33 |
| 2 | Inferioris præcedent. | in \square B. 8 51 bis |
| 4 | Australioris sequent. | 8 56 B. |
| | in \square | 8 55 $\frac{1}{4}$ |
| 3 | Superioris sequent. | 11 2 $\frac{1}{2}$ B. |
| | in \square | 11 2 $\frac{3}{4}$ |
| 5 | Superioris vel primæ in australi ala | 4 6 B. |
| | | 4 5 $\frac{1}{2}$ |

DIE 15 MARTIJ, A. M.

| | |
|-------------|--|
| H. 0 50' 5" | Transibat Spica \mathbb{M} per Merid. habens Alt. |
| | per Chal. 25 7 $\frac{5}{6}$ |
| | per Volub. 25 8 |
| | per Q. azim. 25 7 |

Declinationes

| | | |
|---|--|-------------------------------|
| 6 | Sequentis ³ lucidioris in ala australi | 1 39 $\frac{1}{2}$ B. 1 40 |
| 7 | Tertiæ in australi ala 3 mag. | 0 50 |
| | quæ est lucidior | B. 0 49 |

¹ In codice D numerus 2 lineis inductus est.² Postea adscriptum est: »Creditur 20«.³ Debet esse »Quatuor præcedentis«.⁴ Debet esse 1°.

| | | |
|----|---------------------------|-----------------------|
| 10 | Cinguli \mathbb{M} | 5 40 $\frac{1}{2}$ B. |
| | | 5 40 $\frac{3}{4}$ |
| 13 | Vindemiatoris | 13 13 B. |
| | | 13 12 $\frac{1}{2}$ |
| 9 | Vltimæ in australi ala | 3 20 M. 3 21 |
| 15 | Vmbilici | 1 32 B. |
| | | 1 32 $\frac{1}{8}$ |

Distantia inter borealem lancem &
25 Australem pedem Vir-

| | | |
|----|---------------------------------|------------------------|
| | ginis | 14 45 $\frac{1}{2}$ |
| | | 14 45 $\frac{3}{4}$ |
| 23 | Infimam in Sirmate \mathbb{M} | 15 51 |
| | Repet. | 15 51 $\frac{3}{4}$ |
| 22 | Mediam in fimbria | 15 30 $\frac{1}{2}$ |
| | | 15 31 |
| 24 | Supremam in Sirmate | 14 12 |
| | | 14 13 |
| 26 | Borealem pedem \mathbb{M} | 9 13 bis |
| | Declinatio | |
| 25 | Australis pedis | 11 26 $\frac{1}{2}$ M. |
| | | 11 26 $\frac{1}{4}$ |
| 23 | Australis in fimbria | 8 17 $\frac{1}{2}$ M. |
| | | 8 17 |
| 22 | Superioris in fimbria | 3 58 M. |
| | | 3 57 $\frac{3}{4}$ |
| 26 | Borealis pedis | 3 45 M. |
| | | 3 45 $\frac{1}{2}$ |

DIE 8 APRILIS, VESPERI.

| Num. | Mag. | Declinatio | |
|------|--------|---|-----------------------------|
| 29 | 6 | Eius quæ est in collo \mathbb{M} | 8 5 $\frac{1}{2}$ B. 8 6 |
| 33 | 6 | Eius quæ est in ceruice \mathbb{M} | 5 59 B. 5 58 |
| 11 | 6 | Supremæ in Bor. | 12 34 B. |
| | mai. } | ala | 12 34 $\frac{1}{2}$ |
| 12 | 6 | | 9 58 $\frac{1}{2}$ B. |
| | min. } | | 9 58 |
| 28 | 6 | | 9 4 $\frac{3}{4}$ B. |
| | min. } | | 9 5 $\frac{1}{4}$ |
| 8 | 6 | | 2 ⁴ 28 M. |
| 30 | 6 | | 11 37 B. |
| | | | 11 38 |
| 31 | 6 | | 7 40 $\frac{1}{2}$ B. |
| | | | 7 41 |

32 6
34 6
27 6
25 4
23 4
22 4

5 49 B.
5 50
5 39 B.
5 39 $\frac{1}{2}$
0 34 B.
0 35
11 23 $\frac{1}{2}$ M.
11 23
8 17 M.
8 16 $\frac{3}{4}$
3 56 M.
3 57

DIE 23 APRILIS.

Altitudo Meridiana Spicæ \mathfrak{M}
per Volub. 25 7 $\frac{2}{3}$
per Chalyb. 25 7 $\frac{5}{6}$
per Quadr. nouum mini-
mum 25 10

Pro examinando Quadrante nouiter
facto, Altit. Merid. Vmbilici \mathfrak{M}
per Volub. 35 36 $\frac{1}{3}$
per nouum minimum 35 40

ASTERISMUS LIBRÆ SECUNDUM NOSTRAM DESIGNATIONEM.

✧ 4

✧ 3

✧ 10

✧ 7

✧ 5

✧ 8

✧ 9

✧ 2

✧ 6

✧ 1

DIE 21 MARTIJ.

Post mediam noctem.

Inter lucidam stellam in femore Ophi-
uchi & paruulam supra australem
lancem Ω

34 5

34 6 $\frac{1}{2}$

34 4

Inter [eandem] & 7 Ω 22 55 $\frac{1}{2}$

22 56

22 55

Inter [eandem] & 4 Ω

32 23

32 23 $\frac{1}{2}$ Decl. Bor. lancis Ω

M.

7 47 $\frac{2}{3}$

alt. pin.

7 47 $\frac{3}{4}$ Decl. 10 Ω

M.

8 47 $\frac{1}{3}$ 8 46 $\frac{5}{6}$ Decl. 4 Ω 6 48 $\frac{1}{2}$

6 49

DIE 30 MARTIJ, MANE.

Mag. Inter finiftr. genu Ophiuchi &

5 } Paruulam supra auftra-26 33 $\frac{2}{3}$
min. } lem lancem Ω repet. 26 33

5 } 6 Ω 22 40

min. } 22 39 $\frac{5}{6}$

6 } 9 Ω 16 45 $\frac{2}{3}$

min. } 16 46

5 } 7 Ω 15 35 $\frac{1}{2}$

15 36

6 } 8 Ω 13 51 $\frac{1}{2}$

13 52

5 Ω 19 10

Obscura est, igitur quater vel quin-
quies obseruata, melius obseruari non
potuit.

Alt. Merid. 7 Ω per Volub. 20 45 $\frac{2}{3}$

Hæ stellæ erant hoc tempore circa
Meridianum.

| | |
|---|---------------------|
| Declin. 2 Ω | 12 34 $\frac{1}{3}$ |
| | 12 35 |
| Declin. 6 Ω | 14 38 $\frac{1}{3}$ |
| | 14 38 |
| Declin. 5 Ω | 13 55 |
| | 13 50 |
| Erat nimis obscura & propterea melius obseruari non poterat. | |
| Declin. 7 Ω | 13 20 $\frac{1}{3}$ |
| | 13 19 $\frac{1}{2}$ |

DIE 6 MAIJ, NOCTU.

| | |
|--------------------------|---------------------|
| Inter Spicam & australem | |
| lancem Ω | 21 23 |
| Eadem distantia repetita | 21 22 $\frac{1}{2}$ |
| | 21 22 |
| Inter Spicam & Borealem | |
| lancem Ω | 27 31 50 bis |
| Eadem dist. repetita | 27 32 30 |

ASTERISMUS SCORPIJ,
EARUM VIDELICET STELLARUM, QUÆ SUPRA NOSTRUM
FINITOREM CONSPICIUNTUR.

✧ = 2



DIE 31 MARTIJ.

| | | |
|--|---|---------------------|
| Declinatio 4 \mathbb{M} | 27 49 $\frac{1}{2}$, altero pinnacidio | 27 48 $\frac{2}{3}$ |
| Altitudo meridiana Cordis \mathbb{M} per Q. Volub. | | 8 45 |
| Declinatio 10 \mathbb{M} | 26 43, altero pinnacidio | 26 42 $\frac{2}{3}$ |

ASTERISMUS SAGITTARIJ.

DIE 25 JULIJ, VESPERI.

Cum obseruarentur primum, fuit 4^{tæ}
 Altitudo circiter 6½ Grad.

| Num. Imag. | Mag. | Distat ab inferiori in sequenti cornu ζ | |
|---------------|------|---|--|
| 4 | 5 | Quæ est in arcu x [↑] | 28 30 ³ / ₄ |
| | | | 28 31 |
| 7 | 5 | } Sequens in sagitta min. } | 25 19 ¹ / ₄ |
| | | | 25 19 |
| 6 | 4 | Quæ est in humero sinistro | 23 1 ¹ / ₂ 23 1 ² / ₆ |
| 21 | 6 | Quæ est in scapula | 21 22 21 22 ¹ / ₆ |
| 8 | 6 | Quæ est in fronte x [↑] | 22 1 22 1 ² / ₆ |
| 9 | 4 | Prior in capite x [↑] | 20 44 20 44 ³ / ₄ |
| 10 | 5 | Media in capite x [↑] | 19 23 ¹ / ₄ 19 23 ¹ / ₂ |
| 11 | 4 | Tertia & vltima in capite x [↑] | 18 2 bis |
| 12 | 6 | In Boreo contactu | 16 44 |
| | | trium australior | 16 45 |
| 13 | 4 | Media in contactu | 14 34 14 34 ³ / ₄ |

| | | | |
|----|---|--------------------------|--|
| 14 | 5 | Sequens in con- tactu | 14 20 ¹ / ₂ 14 21 |
|----|---|--------------------------|--|

DIE 27 JULIJ, VESPERI.

| Num. | Mag. | Declinatio merid. | | Adde pro Refract. |
|------|------|--------------------------------------|--|-------------------------------|
| 4 | 5 | } 4 num. in x [↑] mai. } | 25 25 ² / ₃ | 9' |
| | | | 25 26 ¹ / ₂ | |
| 6 | 4 | Lucidæ eius in humero | 26 35 ¹ / ₂ 26 35 ² / ₆ | 9 |
| 7 | 5 | } Sequentis in min. } | 27 8 | 9 |
| | | | 27 8 | |
| 9 | 4 | Primæ in capite | 21 30 21 29 ¹ / ₂ | 8 ¹ / ₄ |
| 10 | 5 | Mediæ in capite | 22 10 ¹ / ₂ 22 10 ³ / ₄ | 8 |
| 11 | 4 | Vltimæ in capite | 21 32 ² / ₆ 21 32 ³ / ₄ | 8 |
| 13 | 4 | Mediæ in contactu | 18 30 18 29 ¹ / ₂ | 8 |

N. B. Cum hæ declinationes obser-
 uarentur, erant stellæ admodum de-
 cliues, adeo vt quæ tum Horizonti
 proxima erat, haberet Altitudinem
 circiter 4 graduum.

ASTERISMUS CAPRICORNI.

DIE 1 AUGUSTI, VESPERI.

| Num. Schem. | Mag. | Inter primam alæ Pegasi & | |
|-----------------|------|---|--|
| 2 | 5 | } Mediam in min. } | 49 16 |
| | | | 49 16 ¹ / ₄ |
| 7 | 6 | Orientaliorem trium in capite ζ | 50 40 50 40 ³ / ₄ |
| 19 | 5 | Anteriorem dua- rum in dorso ζ | 43 38 ¹ / ₃ 43 38 ⁵ / ₆ |
| 20 | 5 | Sequentem in dorso ζ | 40 48 ² / ₃ 40 48 |
| 23 ¹ | 4 | Duarum in educti- one caudæ præce- dentem | 38 3 38 3 ³ / ₄ |
| | | Declinationes earundem Austr. | |
| 2 | 5 | Mediæ in cornu ζ | 13 45 ¹ / ₂ alt. 13 45 |
| 7 | 6 | Trium in capite Australis | 19 4 19 5 |

| | | | |
|----|---|----------------------------------|--|
| 19 | 6 | Præced. duarum in dorso | 18 45 ¹ / ₄ 18 46 |
| 20 | 6 | Sequentis earun- dem in dorso | 18 29 ¹ / ₂ 18 28 ⁵ / ₆ |
| 23 | 4 | Præcedentis dua- rum in cauda | 18 24 18 23 ¹ / ₄ |
| 24 | 4 | Sequentis earun- dem | 17 50 ¹ / ₂ 17 51 ¹ / ₄ |

DIE 18 SEPTEMBRIS, VESPERI.

| | | | |
|--|--|--|--|
| | | Inter lucidam in dextro humero Ophiuchi & fe- cundam ζ | 42 41 42 42 |
| | | Inter luc. in dext. hum. Oph. & decimam nonam ζ | 54 37 ⁵ / ₆ 54 37 ³ / ₄ |
| | | Inter superiorem in cornu ζ & vicesimam eius | 16 6 16 6 ³ / ₄ |

¹ Hic numerus lineis inductus est.

| | |
|-------------------------|---------------------|
| Inter super. in cornu ζ | 20 15 $\frac{1}{2}$ |
| & 23 eius | 20 16 |
| Inter superiorem in | 21 50 |
| cornu ζ & lucidam | 21 50 $\frac{1}{3}$ |
| caudæ eius | 21 49 $\frac{3}{4}$ |

DIE 19 SEPTEMBRIS, VESPERI.

| | |
|-------------------------|-------|
| Inter primam alæ Pegafi | |
| & 7 ζ | 50 41 |

DIE 27 SEPTEMBRIS, VESPERI.

| | |
|-------------------------------|---------------------|
| Inter inferiorem in finist'ro | 17 20 |
| cornu ζ & 14 num. eiusd. | 17 19 $\frac{1}{3}$ |
| Erat tunc Altit. 14 | 9 $\frac{2}{3}$ ° |
| Num. 15 erat altit. | 10 $\frac{1}{2}$ |

DIE 28 SEPTEMBRIS, VESPERI.

| Inter 1 alæ Pegafi & | | | Altit. |
|----------------------|---------------------|---------------------|------------------|
| 11 ζ | 52 34 $\frac{5}{6}$ | 52 35 $\frac{1}{4}$ | 12 0 |
| 14 | 44 34 $\frac{3}{4}$ | 44 35 | 13 0 |
| 15 | 43 48 | 43 49 | 15 $\frac{1}{6}$ |
| 21 | 40 47 | 40 47 $\frac{1}{4}$ | 15 $\frac{5}{6}$ |
| 22 | 39 35 $\frac{3}{4}$ | 39 36 | |
| 19 | 43 40 $\frac{3}{4}$ | 43 41 $\frac{1}{4}$ | |
| 18 | 45 47 | 45 48 | |
| 20 | 40 46 | 40 46 $\frac{1}{2}$ | |

DIE 30 OCTOBRIS, VESPERI.

| Num. | Mag. | Declinatio | |
|------|------|------------|---------------------|
| 21 | 5 | | 21 10 $\frac{1}{4}$ |
| | | altero | 21 10 |

Erat tunc præcedens trium in dextra manu ☿ in Meridiano.

| | | |
|----|---|---------------------|
| 15 | 6 | 23 27 |
| | | 23 28 |
| 14 | 5 | 24 2 $\frac{1}{2}$ |
| | | 24 3 |
| 18 | 5 | 21 25 |
| | | 21 24 $\frac{3}{4}$ |

Erat altit. eius cum obseruaretur 11 g.

| | | |
|----|-------------------------|---------------------|
| 22 | 5 | 20 38 |
| | | 20 39 |
| 28 | 6 | Supremæ in |
| | | cauda ζ |
| | | 10 51 $\frac{1}{2}$ |
| | | 10 51 $\frac{3}{4}$ |
| 25 | neb. Proximæ inferioris | 13 11 $\frac{1}{2}$ |
| | | 13 10 |
| 27 | neb. 27 in cauda ζ | 17 12 $\frac{1}{2}$ |

Aut numeratio aut declinatio falsa est.

| | | |
|----|----------------------|---------------------|
| 26 | Declin. 26 in cauda | 15 32 $\frac{1}{4}$ |
| | | 15 31 |
| 28 | Inter super. cornu ζ | 21 38 $\frac{1}{2}$ |
| | & 28 ζ | 21 39 $\frac{1}{3}$ |
| | Repet. | 21 39 $\frac{1}{3}$ |
| 26 | Inter super. cornu ζ | 23 15 |
| | & 26 ζ | 23 15 $\frac{1}{4}$ |

DIE 20 NOUEMBRIS, VESPERI.

| | | | |
|----|--------|-----------------|---------------------|
| 27 | 6 | Inter 2)(auf. | 26 41 $\frac{3}{4}$ |
| | min. } | & 27 ζ | 26 42 $\frac{1}{2}$ |
| 28 | 6 | Inter 2)(auf. | 25 58 |
| | min. } | & 28 ζ | 25 58 $\frac{3}{4}$ |

Reliquæ duæ obscuræ sunt ideoque inobseruabiles.

ASTERISMUS AQUARIJ

SECUNDUM NOSTRAM DENOTATIONEM.

DIE 3 JANUARIJ, VESPERI.

| | |
|------------------------|---------------------|
| Distantia inter mediam | |
| dextræ manus ☿ | 12 24 |
| & occiput)(| 12 24 $\frac{1}{2}$ |

DIE 8 JANUARIJ, VESPERI.

| | |
|--------------------------------|---------------------|
| Inter extremam alæ Pegafi & 32 | 8 $\frac{3}{4}$ |
| præced. trium in vrna ☿ | 32 8 |
| Inter extr. alæ Peg. & me- | 29 53 |
| diam in vrna ☿ | 29 53 $\frac{1}{2}$ |

¹ Verba hic uncis inclusa lineis inducta sunt.

| | |
|--------------------------|---------------------------|
| Inter extr. alæ Pegafi & | 28 33 $\frac{1}{4}$ |
| 3 ☿ | 28 33 |
| Declin. præced. trium in | 3 21 |
| vrna ☿ | altero 3 20 $\frac{1}{2}$ |
| Declin. mediæ in vrna ☿ | 2 2 |
| | 2 1 $\frac{3}{4}$ |

N.B. Hæ stellæ in manu ☿ accipiebantur cum erant decliuiores versus horizontem (in altitudine circiter 5 vel 4 grad.)¹.



Declin. tertiæ in manu \approx 2 9 $\frac{2}{3}$
 2 9 $\frac{3}{4}$
*Puto quod fuerint admodum decli-
 ues hæ stellæ cum obseruarentur.*

DIE 4 SEPTEMBRIS, VESPERI.

Num. Mag.

10 5 Declin. supremæ in vrna \approx
 quæ est num. 10

Auft. 0 39
 vtroq.

6 Alt. mer. capitis \approx
 per Chal. 34 31 $\frac{1}{4}$
 Decl. eiusdem
 per Armill. 0 27 $\frac{1}{6}$

altero 0 28

9 5 } Declin. præcedentis
 mai. } in vrna \approx siue index-
 tro cubito, A. 3 23 $\frac{1}{2}$ vtr.

11 5 Sequentis & 2 4 $\frac{2}{3}$ A.
 mediæ in vrna 2 4 $\frac{5}{6}$

12 5 Vltimæ trium ad 2 11 $\frac{1}{3}$ A.
 ortum melior 2 12

19 Inter lucidam Vultu-
 ris & dext. cubitum 38 59 $\frac{3}{4}$
 \approx 39 0 $\frac{1}{6}$

11 Inter luc. Vult. &
 mediam in vrna \approx 40 21 $\frac{1}{2}$ bis

12 Inter luc. Vult. &
 vltimam trium in 41 59 $\frac{3}{4}$
 vrna 42 0

N. B. Cum obseruarentur hæ stellæ,
 fuerunt circa Merid. in maxima alt.,
 ita vt refraçtio nihil ingerat obstaculi.
 Postea nubes.

DIE 15 SEPTEMBRIS.

Inter primam alæ Pegasi &

8 Lucidam in manu præ-
 cedenti \approx 41 59 $\frac{1}{2}$ bis

4 Sinistrum humerum \approx 31 3
 31 3 $\frac{1}{2}$

| | | |
|-----------------------------|-----------------------|----------------------------------|
| Inter extremam alæ Pegasi & | | |
| 2 | Dextrum humerum ☿ | 35 5 |
| | | 35 5 $\frac{1}{2}$ |
| 9 | Præcedentem in vrna ☿ | 32 10 $\frac{1}{2}$ |
| | | 32 11 $\frac{1}{2}$ |
| | Pone | 32 10 $\frac{5}{6}$ |
| 11 | Mediam in vrna ☿ | 29 52 |
| | | 29 52 $\frac{1}{6}$ |
| | Pone | 29 52 $\frac{2}{3}$ ¹ |
| 12 | Vltimam trium | 28 37 |
| | in vrna ☿ | 28 36 $\frac{3}{4}$ |
| | Pone | 28 36 ¹ |
| 10 | Decimam ☿ | 30 0 |
| | | 30 0 $\frac{1}{2}$ |

DIE 3 OCTOBRIS, VESPERI.

| | | | |
|-----------------------------|------|--------------------------|---------------------|
| Num. | Mag. | Inter inferius cornu ζ & | |
| 6 | 6 | 6 in sinistra | 12 18 |
| | | manu ☿ | 12 19 |
| 5 | 5 | Stellam in sinistra | 20 3 $\frac{3}{4}$ |
| | mai. | axilla ☿ | 20 4 $\frac{1}{6}$ |
| 3 | 5 | Illam in dextra | 28 13 $\frac{1}{2}$ |
| | | scapula ☿ | 28 14 |
| 16 | 4 | Illam supra anum | 25 33 $\frac{1}{2}$ |
| | min. | | 25 34 |
| 13 | 5 | Præcedentem seu lu- | |
| | mai. | cidiozem in fundo | 29 13 |
| | | vrnæ | 29 13 $\frac{2}{3}$ |
| Inter sinistrum humerum ☿ & | | | |
| 24 | 5 | Lucidiorem earum | |
| | | in prima effusione | 20 15 $\frac{5}{6}$ |
| | | ab vrna | 20 16 $\frac{1}{6}$ |
| 15 | 5 | 15 ☿ scilicet in | 15 29 $\frac{1}{2}$ |
| | min. | dextro femore | 15 30 |
| 19 | 5 | Genu dextrum ☿ | 20 49 |
| | | | 20 49 $\frac{3}{4}$ |
| 18 | 4 | Eam quæ est in | 22 46 $\frac{1}{6}$ |
| | mai. | tibia dextra | 22 47 |

DIE 18 OCTOBRIS, VESPERI.

| | | | |
|-----------------------------|---|----------------------------|------------|
| Inter extremam alæ Pegafi & | | | |
| 6 | 6 | 6 ^{am} in conuexo | 52 37 |
| | | finiſtræ manus ☿ | 52 37½ |
| 7 | 6 | 7 in ſiniſtra | |
| mai. | | manu ☿ | 55 16¾ bis |
| 5 | 5 | 5 ſub ſiniſtra | 44 53½ |
| | | axilla | 44 54 |
| 3 | 5 | | 36 32 |
| | | | 36 32½ |

| | | | |
|----|------|-------------------|-------------------------|
| 13 | 5 | 13 in vrna ☿ | 36 52 $\frac{3}{4}$ bis |
| 15 | 5 | | 42 43 $\frac{3}{4}$ |
| | min. | | 42 44 $\frac{1}{8}$ |
| 24 | 4 | Primam lucidiorem | |
| | min. | in effusione | 30 16 bis |
| 19 | 5 | 19 supra dextrum | |
| | | genu ☿ | 35 23 $\frac{3}{4}$ bis |
| 18 | 4 | | 36 32 |
| | | | 36 32 $\frac{1}{4}$ |

DIE 28 OCTOBRIS, VESPERI.

| Declinationes stellarum in ♊ | | | |
|------------------------------|------|-----------------------|---------------------|
| Num. | Mag. | Meridionales. | |
| 7 | 6 | Eius quæ est media | 10 27 |
| | mai. | in sinistra manu | 10 27 $\frac{1}{4}$ |
| 6 | 6 | Eius in sinistra | 12 57 $\frac{1}{2}$ |
| | | manus conuexo | 12 57 |
| 5 | | Eius quæ est sub | 9 38 |
| | | sinistra scapula | 9 37 |
| 3 | 5 | Eius quæ est sub | |
| | | lucida in humero | 4 5 $\frac{3}{4}$ |
| | | dextro | 4 5 $\frac{1}{2}$ |
| 13 | 5 | Alterius in vrna | 9 45 $\frac{1}{2}$ |
| | | | 9 45 |
| 14 | | in vrna habet ean- | |
| | | dem declin. | |
| 16 | | Eius quæ est in | 15 46 $\frac{1}{4}$ |
| | | fine dorfi | 15 46 $\frac{1}{2}$ |
| | | Fuit tunc Altitudo | |
| | | eius | 18 20 |
| 15 | | Eius quæ est ad fun- | |
| | | dum vrnæ in dext. | 12 42 |
| | | femore | 12 42 $\frac{1}{4}$ |
| 24 | | Eius quæ est in prin- | |
| | | cipio effusionis | 9 41 |
| | | lucidior | 9 41 $\frac{1}{4}$ |

| | | | |
|----|------|-----------------|---------------------------|
| | | Decl. | Alt. |
| 19 | 4 | Eius quæ est in | 15 41 $\frac{3}{4}$ 17 10 |
| | min. | genu dextro | 15 42 |
| 18 | | Eius quæ est in | 17 57 $\frac{1}{2}$ 17 40 |
| | | tibia genu | |
| | | dextri | 17 57 |
| 42 | 1 | Fomahand | 31 29 $\frac{1}{2}$ 2 40 |
| | | | 31 30 |
| 39 | | | 23 17 10 10 |
| | | | 23 16 $\frac{3}{8}$ |
| 36 | | in effusione | 22 18 $\frac{1}{4}$ 12 0 |
| | | | 22 19 |

¹ Sic in codice D.

| | | |
|----|---|--------------------------|
| 38 | in effusione meliori pinna- cidio bis | 23 9 $\frac{1}{4}$ 11 10 |
| | | 23 9 $\frac{2}{3}$ |
| 37 | | 22 46 $\frac{1}{2}$ |
| | | 22 47 $\frac{1}{4}$ |
| 33 | | 20 2 $\frac{1}{4}$ |
| | | 20 3 |

DIE 1 NOUEMBRIS.

Distantiæ stellarum in \approx .

| | | |
|----|---------------------------------------|---------------------|
| | Inter lucidiorem in cauda γ & | |
| 41 | Eam quæ est in effusione \approx | 20 11 |
| | | 20 11 $\frac{1}{4}$ |
| 40 | in effusione | 20 34 $\frac{1}{3}$ |
| | | 20 35 |
| 39 | in effusione | 20 8 |
| | | 20 8 $\frac{3}{4}$ |
| 36 | in effusione | 23 11 $\frac{1}{4}$ |
| | | 23 12 |
| 37 | | 23 56 |
| | | 23 56 $\frac{1}{3}$ |
| 38 | | 25 40 |
| | | 25 40 $\frac{1}{2}$ |
| 33 | | 27 30 |
| | | 27 30 $\frac{3}{4}$ |
| 34 | | 28 25 |
| | | 28 26 |
| 35 | | 29 45 $\frac{5}{6}$ |
| | | 29 46 |

Viceversa in \approx

| | | |
|----|-------------------------------|---------------------|
| | Inter lucidam in cauda Ceti & | |
| 41 | | 23 20 bis |
| 40 | | 22 22 $\frac{1}{2}$ |
| | | 22 21 $\frac{3}{4}$ |
| 39 | | 22 23 |
| | | 22 23 $\frac{1}{6}$ |
| 36 | | 19 9 |
| | | 19 9 $\frac{1}{4}$ |
| 37 | | 18 30 bis |
| 38 | | 16 48 $\frac{1}{6}$ |
| | | 16 48 $\frac{1}{2}$ |
| 33 | | 14 40 |
| | | 14 40 $\frac{1}{3}$ |
| 34 | | 13 40 |
| | | 13 40 $\frac{2}{3}$ |
| 35 | | 12 24 |
| | | 12 25 |

| | | |
|----|---|-------------------------|
| | Inter lucidam in nodo χ & | |
| 32 | | 38 35 $\frac{3}{4}$ |
| | | 38 36 |
| 31 | | 39 6 $\frac{5}{6}$ |
| | | 39 7 |
| 30 | Inter eam quæ proxime vicesimam nonam sub- sequitur a Fomahand numerando, & lucid. in nodo χ , sit numero 30 | 42 27 |
| | | 42 27 $\frac{3}{4}$ |
| 29 | in effusione | 42 36 |
| | | 42 36 $\frac{1}{2}$ |
| 28 | in effusione | 43 5 $\frac{1}{2}$ bis |
| 27 | in effusione | 42 29 $\frac{1}{8}$ bis |
| 26 | in effusione | 42 46 |
| | | 42 46 $\frac{1}{3}$ |
| 25 | in effusione | 45 19 $\frac{3}{4}$ |
| | | 45 20 $\frac{1}{4}$ |
| | Inter 7 & 4 \approx | 10 17 $\frac{1}{6}$ |
| | | 10 17 $\frac{1}{2}$ |
| | Inter 6 & 2 \approx | 17 47 $\frac{1}{3}$ |
| | | 17 48 $\frac{1}{6}$ |
| | Inter 8 & 5 \approx | 12 31 |
| | | 12 31 $\frac{1}{2}$ |
| | Inter 8 & 3 \approx | 20 12 bis |
| | Inter 8 & 13 \approx | 22 8 $\frac{1}{2}$ |
| | | 22 8 $\frac{3}{4}$ |
| | Inter 8 & 14 \approx | 22 54 $\frac{3}{4}$ |
| | | 22 54 $\frac{5}{6}$ |
| | Inter 8 & 15 \approx | 25 23 $\frac{2}{3}$ |
| | | 25 24 |
| | Declin. 15 in effusione \approx | 11 10 $\frac{1}{2}$ |
| | | 11 11 |
| | Inter 8 & 16 \approx | 19 46 $\frac{5}{6}$ |
| | | 19 47 |
| | Inter 8 & lucidiorem in effusione \approx | 30 56 $\frac{1}{6}$ |
| | | 30 56 $\frac{5}{6}$ |
| | Inter 8 & 19 \approx | 30 9 $\frac{1}{6}$ |
| | | 30 9 $\frac{1}{4}$ |
| | Inter 8 & 18 \approx | 31 34 $\frac{1}{2}$ |
| | | 31 35 |
| | Inter 23 γ & Fomahand | 21 53 |
| | Inter lucidam caudæ Ceti & Fomahand | 26 42 $\frac{2}{3}$ |
| | | 26 43 |
| | Inter 18 \approx & lucidam in cauda Ceti | 26 7 bis |
| | Inter 23 in effusione & lucid. in nodo χ | 51 30 |
| | | 51 30 $\frac{2}{3}$ |

DIE 16 NOUEMBRIS.

Declinationes stellarum ☿ Aufr.

N. B. Fuerunt in maxima altitudine circa Meridianum cum obseruarentur.

Num. Mag.

| | | | | |
|----|------|-----------------------|------|-----|
| 41 | 6 | Infimæ in aqua | 25 | 1½ |
| | | ☿prox. Fomahand | 25 | 2½ |
| | | Altit. eius tunc erat | 7 | ¾ |
| 40 | 6 | Mediæ trium | 24 | 33 |
| | | infimarum | 24 | 33½ |
| | | Altitudo | 8 | |
| 39 | 5 | Supremæ trium | 23 | 17¾ |
| | min. | | 23 | 18½ |
| | | Altit. eius | 10 | ½ |
| 36 | 5 | Sequentium trium | | |
| | min. | intermediarum | 22 | 16½ |
| | | occidentioris | 22 | 17¼ |
| | | Altitudo | 12 | ½ |
| 37 | 6 | Earundem mediæ | 22 | 46 |
| | | | 22 | 47 |
| | | Altitudo | 11 | 1/6 |
| 38 | 6 | Harum infimæ | 23 | 7 |
| | mai. | & orientioris | 23 | 7½ |
| | | incertæ. | Alt. | 10 |
| 32 | 5 | | 16 | 44¾ |
| | min. | | 16 | 45 |
| 31 | 6 | | 16 | 26¼ |
| | mai. | | 16 | 25½ |
| 33 | 6 | In tertio aquæ | 20 | 3 |
| | mai. | fluxu trium Bor. | 20 | 3¾ |
| 29 | 5 | Sequentium duar. | 11 | 18½ |
| | min. | Borealis & mediæ | 11 | 19 |
| 30 | 6 | Eius quæ magis | 11 | 48½ |
| | mai. | in Austrum Merid. | 11 | 48 |
| 26 | 6 | Sequentis in primo | 8 | 12½ |
| | mai. | flexu aquæ | 8 | 12¾ |

DIE 20 NOUEMBRIS, VESPERI.

| | | | | |
|---|------|----------------------|----|--------|
| 33 | 6 | Declin. 33 ☿ | 20 | 5 |
| | | | 20 | 4 |
| 34 | 6 | Mediæ trium in | 20 | 29½ |
| | min. | fluxu Bor. | 20 | 30½ |
| 35 | 6 | Sequentis trium in | 21 | 7 |
| | min. | Boreo fluxu | 21 | 7¾ |
| 27 | 6 | In altero fluxu | 9 | 55 |
| | | Australi | 9 | 54¾ |
| 25 | 6 | Eius quæ sequitur in | 9 | 35 |
| | | primo fluxu aquæ | 9 | 35½ |
| Distantiæ stellarum in superiori fluxu aquæ ad occasum. | | | | |
| Inter 18 ☿ & 32 eius | | | 11 | 38 |
| | | | 11 | 38½ |
| Inter 18 ☿ & 31 eius | | | 11 | 0 |
| | | | 11 | 1 |
| Inter præcedentem humerum | | | | |
| ☿ & 28 eius | | | 26 | 4½ bis |
| Inter præced. humerum | | | 26 | 36 |
| ☿ & 29 eius | | | 26 | 35¾ |
| Inter præced. humerum | | | 26 | 54 |
| ☿ & 30 eius | | | 26 | 55 |
| Inter sequentem humerum | | | 19 | 12 |
| ☿ & 27 | | | 19 | 12¾ |
| Inter sequent. humerum ☿ | | | 16 | 31 |
| & 25, 6 mag. | | | 16 | 32 |
| Inter seq. hum. ☿ & 23 ☿ | | | 8 | 53 |
| paulo maior | | | 8 | 53¾ |
| Inter sequentem humerum | | | 18 | 3 |
| ☿ & 26, 5 mag. | | | 18 | 3¾ |
| Declin. 23 ☿ | | | 6 | 19¾ |
| | | | 6 | 19½ |
| Declin. 26 ☿ | | | 8 | 12¾ |
| | | | 8 | 13 |
| Declin. 11 ☿ | | | 2 | 1 |
| | | | 2 | 1¾ |

ASTERISMUS PISCIUM

SECUNDUM NOSTRAM DESIGNATIONEM.

DIE 5 JANUARIJ, VESPERI.

| | |
|---------------------------|----------|
| Declin. caudæ ☿ australis | |
| per Armillas | 4 36½ B. |
| Declin. borealis in aluo | |
| piscis Bor. | 25 3¼ |

| | |
|---------------------------------|--------|
| Declin. inferioris duarum in | |
| aluo ☿ borealis | 22 23 |
| Declin. sequentis in spina | |
| ☿ borealis | 18 50½ |
| Declin. præcedentis in australi | |
| spina piscis borealis | 19 15½ |



DIE 5 SEPTEMBRIS, VESPERI.

| | | | | | | | |
|--------|---------------------|----|----------------------|--------|--------------------|--|-------------------------|
| Mag. | Piscis australis. | | | | & 7) | | 30 26 $\frac{1}{5}$ |
| 5 | Inter Vulturem & | 48 | 15 $\frac{2}{3}$ | 5 | Declin. 1) | | 1 38 $\frac{1}{5}$ vtr. |
| | 1 piscis Auftr. | 48 | 15 $\frac{3}{4}$ | 4 | Declin. 2) | | 1 2 $\frac{1}{2}$ B. |
| 4 | Inter lucid. Vult. | 51 | 32 $\frac{1}{3}$ | min. } | | | 1 2 $\frac{3}{4}$ |
| min. } | & 2) | 51 | 32 $\frac{1}{4}$ | 6 | Declin. 3) B. | | 3 11 vtr. |
| 6 | Inter lucid. Vult. | 52 | 9 | 5 | Declin. 4) B. | | 4 10 |
| | & 3) | 52 | 10 | | | | 4 10 $\frac{3}{4}$ |
| 5 | Inter lucid. Vult. | 53 | 53 $\frac{1}{2}$ | 5 | Declin. 5) B. | | 3 25 $\frac{5}{6}$ |
| | & 4) | 53 | 53 $\frac{2}{3}$ | mai. } | | | 3 25 $\frac{1}{2}$ |
| 5 | Inter os Pegasi | 28 | 56 $\frac{1}{2}$ | 4 | Declin. 6) Austr. | | 0 58 $\frac{1}{5}$ |
| mai. } | & 5) | 28 | 56 $\frac{2}{3}$ | | | | 0 58 $\frac{2}{3}$ |
| 4 | Inter os Peg. & 8) | 33 | 31 $\frac{1}{2}$ bis | 5 | Declin. 7) Austr. | | 0 28 $\frac{5}{6}$ |
| min. } | | | | min. } | | | 0 28 $\frac{1}{2}$ |
| 5 | Inter os Pegasi | 26 | 59 | 5 | Declin. 8) B. | | 4 36 $\frac{2}{3}$ |
| min. } | & 6) | 26 | 59 $\frac{1}{2}$ | | | | 4 36 $\frac{1}{3}$ |

Declin. oris Pegasi 8 2 $\frac{2}{3}$
 8 3 $\frac{1}{3}$
 Pone 8 3 B.

DIE 6 SEPTEMBRIS, VESPERI.

| Mag. Inter primam alæ Pegasi & | | |
|--------------------------------|------|-------------------------|
| 5 | 11) | 26 35 bis |
| 5 | 12) | 29 51 $\frac{2}{3}$ bis |
| 5 | 13) | 32 28 $\frac{1}{3}$ |
| | | 32 28 $\frac{1}{2}$ |
| 5 | 16) | 36 46 $\frac{1}{3}$ |
| min. } | | 36 47 |
| | | 39 39 $\frac{1}{2}$ |
| 5 | 17) | 39 40 |
| | | 43 17 bis |
| 5 | 18) | 45 22 |
| 4 | 19) | 45 22 $\frac{1}{6}$ |
| | | 39 40 |
| 5 | 20) | 39 39 $\frac{1}{2}$ |
| mai. } | | 37 5 bis |
| | | 35 21 |
| 6 | 21) | 35 21 $\frac{5}{6}$ |
| 4 | 22) | |

DIE 27 SEPTEMBRIS, VESPERI.

Inter lucidam V &

| | | |
|----------------------------|-----------|-------------------------|
| 1) | auftralis | 48 21 |
| | | 48 21 $\frac{1}{3}$ |
| 2) | auftralis | 45 45 $\frac{3}{4}$ |
| | | 45 46 |
| 3) | auftr. | 43 59 |
| | | 43 58 $\frac{5}{6}$ |
| 4) | auftr. | 41 47 $\frac{1}{3}$ |
| | | 41 47 $\frac{2}{3}$ |
| 5) | auftr. | 39 36 $\frac{1}{2}$ |
| | | 39 36 $\frac{2}{3}$ |
| 8) | auftr. | 34 52 $\frac{1}{6}$ |
| | | 34 52 $\frac{1}{2}$ |
| 7) | auftr. | 41 13 $\frac{5}{6}$ bis |
| 6) | auftr. | 44 41 $\frac{1}{3}$ |
| | | 44 41 |
| Inter 3 in interfectione ☿ | | 39 11 $\frac{1}{2}$ |
| & 11 in lino) auftr. | | 39 11 |
| Inter eandem & 12 | | 35 39 $\frac{1}{3}$ |
| in lino) auftr. | | 35 39 $\frac{1}{2}$ |
| Inter eandem & 13 | | 33 0 $\frac{1}{3}$ |
| in lino) auftr. | | 33 1 |
| Inter eand. & 17 in lino | | 26 31 $\frac{2}{3}$ |
| Inter eandem & 18 | | 24 7 $\frac{2}{3}$ |
| in lino auftr.) | | 24 8 $\frac{2}{3}$ |
| Inter eandem & lucid. | | 22 13 $\frac{1}{2}$ |
| in nodo lini, videlicet 19 | | 22 13 $\frac{2}{3}$ |

DIE 28 SEPTEMBRIS, VESPERI.

Declinationes stellarum in piscibus
 quædam repetitæ ac obseruatæ
 per Armillas.

| Num. | | |
|------|--------------------|------------------------------|
| 1 | Declin. 1) | auftralis 1 37 B. |
| 2 | | 1 3 $\frac{1}{2}$ |
| 3 | | 3 10 $\frac{1}{4}$ |
| | | 3 11 $\frac{1}{2}$ |
| 4 | | 4 9 $\frac{1}{2}$ |
| | | 4 9 $\frac{2}{3}$ |
| 5 | | vtroque 3 26 B. |
| 6 | | 0 57 Au. |
| 7 | | 0 28 $\frac{1}{3}$ M. |
| 8 | | 4 37 $\frac{1}{2}$ B. |
| 11 | in lino) | auftr. 5 21 $\frac{1}{2}$ B. |
| | | 5 21 $\frac{1}{3}$ |
| 12 | in lino) | auftr. 5 40 $\frac{5}{6}$ B. |
| | | 5 41 |
| 13 | in lino) | auftr. 5 24 $\frac{1}{2}$ |
| | | 5 25 $\frac{1}{6}$ |
| 16 | in lino) | auftr. 4 1 $\frac{2}{3}$ bis |
| 17 | in lino) | auftr. 3 25 |
| | | 3 25 $\frac{3}{4}$ |
| 18 | in lino) | auftr. 1 9 B. |
| | | 1 9 $\frac{1}{3}$ |
| 19 | feu lucid. in nodo | 0 45 $\frac{1}{3}$ B. |
| | lini auftr. | 0 45 $\frac{1}{4}$ |
| 20 | in lino Boreali | 7 5 B. |
| | | 7 5 $\frac{1}{6}$ |
| 22 | in lino Boreali | 13 12 $\frac{1}{2}$ |
| | | 13 13 |
| 21 | in lino Boreali | 10 1 bis |

Distantiæ inter 1 alæ Pegasi &

| Mag. | | |
|--------|------------------------|--|
| 23 | in cauda) | Borei 34 1 $\frac{1}{4}$ |
| | | 34 2 |
| 5 |) Orientaliorem 4 in | |
| min. } | | latere præcedentis 30 36 $\frac{1}{2}$ |
| | | Borei 35 30 37 |
| 6 | 31 inferiorem trium | |
| | in præcedente latere | 30 11 $\frac{1}{4}$ |
| |) Borei | 30 11 $\frac{1}{2}$ |
| 5 |) 29 supremam trium in | |
| min. } | | præcedente latere 29 21 $\frac{1}{2}$ |
| | |) Borei 29 22 |
| 5 | 33 quæ est in medio | |
| | corpore) borei | 31 41 bis |
| 5 | 32 in latere dextro | 33 31 |
| | siue boreali Borei) | 33 31 $\frac{1}{2}$ |

| | | |
|--------|--|-------------------------|
| 5 min. | Eam quæ 32 fe- quens paulo borealior in spina 36 | 34 13 $\frac{1}{3}$ bis |
| 5 | Lucidiorem in mandi- bula 25, est in recta linea cum cinguli | 32 42 $\frac{3}{4}$ |
| | lucid. Androm. & 33 | 32 43 |
| 6 | Eam quæ est cum proxime obseruata in recta linea borealior | 24 33 5 $\frac{1}{4}$ |

DIE 28 SEPTEMBRIS, VESPERI.

| | |
|---|---------------------|
| Inter ocul. ☿ & 20 in lino | 42 6 $\frac{1}{2}$ |
| ☿ B. | 42 5 $\frac{2}{3}$ |
| Inter eandem & 21 in lino | 43 24 $\frac{3}{4}$ |
| B. ☿ | 43 25 $\frac{1}{2}$ |
| Inter eandem oculum ☿ & 22 in lino ☿ | 44 15 bis |
| Inter lucidam ♀ & 6 ☿ | 44 41 $\frac{2}{3}$ |
| Auftr. | 44 42 |
| Declinatio eiusdem | 0 58 M. |

Vice versa.

| | |
|--|--|
| Inter sequent. & lucid. ped. Perfei & Eam quæ est in cauda, proxi- ma lucidæ in ☿ Bor. | 35 27 35 28 $\frac{1}{3}$ |
| Eam quæ est vna 4 illarum in latere præcedenti | 37 43 $\frac{1}{4}$ 37 43 $\frac{1}{4}$ |
| 29 supremam trium in præce- dente latere ☿ borei | 38 48 $\frac{1}{4}$ bis |
| 33 in medio corpore | 35 49 $\frac{1}{3}$ |
| ☿ borei | 35 51 |
| 32 in ☿ boreo | 33 47 $\frac{1}{3}$ 33 48 |

DIE 28 OCTOBRIS, VESPERI.

| | |
|--|--|
| Inter 2 ☿ Auftralis & 14 in lino Australi | 27 57 $\frac{1}{4}$ 27 58 |
| Inter 2 ☿ Auftr. & 15 in lino Auftr. | 30 11 $\frac{1}{2}$ 30 12 $\frac{1}{4}$ |

Vice versa.

| | |
|---|--|
| Inter 14 in lino auftr. & Aldeb. | 51 51 $\frac{1}{2}$ 51 51 $\frac{1}{4}$ |
| Declin. eius B. | 3 27 $\frac{1}{2}$ bis |
| Declin. 15 in lino australi B. | 1 21 $\frac{1}{2}$ 1 22 $\frac{2}{3}$ |
| Inter Scheat Pegasi & 30 ☿ bor. | 29 10 $\frac{5}{6}$ 29 11 |
| Inter Scheat Peg. & 37 ☿ bor., mag. 6 mai. | 26 1 $\frac{1}{2}$ 26 2 |

| | |
|---|---|
| Inter Scheat Pegasi & 26 ☿ mag. 6 min. | 25 3 $\frac{1}{2}$ 25 4 |
| Inter Scheat Pegasi & 27 ☿ mag. 6 min. | 24 50 $\frac{2}{3}$ 24 51 $\frac{1}{3}$ |
| Inter Scheat Pegasi & 28 ☿ mag. 6 min. | 23 25 $\frac{1}{4}$ 23 26 $\frac{1}{2}$ ¹ |

Vice versa in ☿.

| | |
|---|--|
| Inter oculum ☿ & 23 ☿ borei | 45 1 $\frac{1}{4}$ 45 2 |
| Inter Aldeboram & 31 ☿ | 48 52 $\frac{5}{6}$ 48 52 |
| Inter Palilicium & 35 ☿ | 48 25 48 25 $\frac{1}{2}$ |
| Inter lucidißimam ☿ & 29 ☿ | 49 41 49 41 $\frac{1}{2}$ |
| Inter lucidiß. in capite ☿ & 30 ☿ | 49 15 49 14 |
| Inter λαμπαδιάδα & 33 ☿ | 47 42 47 42 $\frac{1}{2}$ |
| Inter ingentem & rutilam in ☿ & 32 ☿ | 46 26 46 26 $\frac{2}{3}$ |
| Inter ταύρον splendidis- simam & 36 ☿ | 46 12 $\frac{1}{6}$ 46 13 |
| Inter ὀφθαλμὸν Tauri & 25 ☿ | 48 21 $\frac{1}{2}$ bis |
| Inter eam quæ maxime splendet in ☿ & 24 ☿ | 48 38 $\frac{3}{4}$ 48 38 |
| Inter eam quæ in capite ☿ maxime conspicua est & 37 ☿ | 50 24 $\frac{1}{4}$ 50 25 $\frac{1}{3}$ |
| Inter insignem in ☿ & 26 ☿ | 51 21 $\frac{3}{4}$ 51 22 |
| Inter oculum ☿ & 27 ☿ | 51 45 $\frac{1}{2}$ 51 46 $\frac{1}{4}$ |
| Inter oculum ☿ & 28 ☿ | 53 3 53 4 |

DIE 14 NOUEMBRIS.

Declinationes stellarum ☿ Borei

| Num. | Mag. | vno pin. | altero |
|------|--------|---------------------|---------------------|
| 23 | 5 | 17 4 $\frac{1}{2}$ | 17 4 $\frac{3}{4}$ |
| 35 | 5 | 18 53 | 18 52 $\frac{1}{2}$ |
| 29 | 5 | 19 18 | 19 17 $\frac{1}{4}$ |
| 31 | 5 min. | 17 31 $\frac{1}{4}$ | 17 31 $\frac{1}{2}$ |
| 30 | 6 | 18 25 | 18 24 $\frac{1}{2}$ |
| 33 | | 22 26 | 22 26 $\frac{1}{2}$ |
| 32 | | 25 6 bis | |
| 25 | | 27 54 $\frac{1}{2}$ | 27 55 |
| 24 | | 29 14 | 29 14 $\frac{1}{3}$ |

¹ Adscriptum est in margine: »Sulpicor 35, 6«.

| | | |
|-----------------|-------------------------|---------------------|
| 15 in lino Bor. | 1 24 $\frac{3}{4}$ | 1 25 $\frac{1}{2}$ |
| 36 | 26 25 $\frac{5}{8}$ bis | |
| 37 | 29 34 $\frac{1}{2}$ | 29 35 |
| 28 | 25 21 $\frac{1}{3}$ bis | |
| | 25 29 alio tempore | |
| 14 in lino)(| 3 28 | 3 27 |
| 30 | 18 24 $\frac{1}{2}$ | 18 25 $\frac{1}{5}$ |
| 26 | 26 44 $\frac{1}{2}$ | 26 45 |

DIE 20 NOUEMBRIS, VESPERI.

Mag.

| | | |
|--------|-----------------------|-------------------------|
| 6 | Inter Aldeb. & 14)(| 51 52 $\frac{1}{2}$ bis |
| 6 | Inter Aldeb. & 15)(| 50 15 $\frac{1}{2}$ bis |
| 6 | Inter Aldeb. & 16)(| 46 36 $\frac{1}{2}$ |
| mai. } | | 46 36 $\frac{5}{8}$ |
| 6 | Inter Scheat Pegafi & | 29 9 $\frac{2}{3}$ |
| min. } | 30)(Borei | 29 10 |

| | | |
|---------------------------------|-----------------------|---------------------|
| 6 | Inter Scheat Pegafi & | 30 8 |
| | 36)(B. | 30 8 $\frac{3}{4}$ |
| 6 | Inter Scheat Pegafi & | 26 0 |
| | 37)(B. | 26 0 $\frac{1}{2}$ |
| 6 | Inter Scheat Pegafi & | 26 26 |
| min. } | 26)(B. | 26 25 $\frac{3}{4}$ |
| 6 | Inter Scheat Pegafi & | 25 6 |
| min. } | 28)(B. | 25 6 $\frac{2}{3}$ |
| Declin. inferioris & orientalis | | |
| | duarum tenuium | 24 51 $\frac{5}{6}$ |
| | in triangulo)(B. 27 | 24 52 |

DIE 4 DECEMBRIS, VESPERI.

| | |
|-----------------------|---------------------|
| Inter dextrum humerum | 37 18 |
| & 10)(Australis | 37 18 $\frac{2}{3}$ |
| Declin. eiusdem 10)(| 4 48 |

OBSERUATIONES STELLARUM EXTRA ZODIACUM
AD BOREAM.

DIE 3 JANUARIJ, VESPERI.

| | |
|--------------------------|---------------------|
| Declin. Cubiti Andromedæ | 21 11 $\frac{1}{3}$ |
| alt. pin. | 21 11 |

DIE 6 FEBRUARIJ, VESPERI.

| | |
|---------------------|---------------------|
| Alt. merid. Capellæ | |
| per Q. Vol. | 79 34 $\frac{1}{2}$ |

DIE 10 FEBRUARIJ, VESPERI.

| | |
|---------------------------|---------------------|
| Declin. capitis Andromedæ | 26 50 |
| | 26 50 $\frac{1}{2}$ |
| Repetita | 26 50 |
| | 26 50 $\frac{1}{2}$ |

| | |
|-----------------------------------|---------------------|
| Habuit tunc Altit. 30° ad minimum | |
| Alt. merid. Capellæ | |
| per Vol. | 79 34 $\frac{3}{4}$ |

DIE 12 FEBRUARIJ, MANE.

| | |
|--|---------------------|
| Altitudo Arcturi merid. | |
| per Chalyb. | 55 27 $\frac{1}{2}$ |
| per Volub. | 55 27 $\frac{1}{3}$ |
| per Mural. | vet. 55 27 55 |
| | nouo 55 27 35 |
| Vesper. Alt. merid. stellæ in sinistro cubito Erichonij vbi non sunt Capellæ, per Port. min. | 71 10 |

DIE 15 FEBRUARIJ, VESPERI.

| | |
|----------------------------------|---------------------|
| Declin. Arcturi | 21 22 $\frac{1}{2}$ |
| | 21 22 $\frac{2}{3}$ |
| Inter caput Algol | 21 38 $\frac{1}{6}$ |
| & lucid. V | 21 38 $\frac{5}{6}$ |
| Inter caput Algol | 30 54 $\frac{1}{2}$ |
| & Aldeb. | 30 54 $\frac{5}{6}$ |
| Altit. lucid. ped. Erich. merid. | |
| per Volub. | 62 15 |
| per Chalyb. | 62 16 $\frac{1}{4}$ |
| per Q. Min. | 62 16 |

DIE 12 MARTIJ, MANE.

| | |
|--|---------------------|
| Inter Vindemiatores & lucidißimam earum quæ sunt in collo | 40 13 |
| Serpentis Ophiuchi | 40 13 $\frac{1}{2}$ |
| Inter Spicam Virginis & præced. siue finistrum | 47 3 $\frac{1}{2}$ |
| genu Ophiuchi | 47 4 |
| Inter caput Herculis & lucidiß. earum quæ sunt in collo | 23 34 $\frac{5}{6}$ |
| Serpentis Ophiuchi | 23 35 |
| Altit. merid. lucidiß. in collo Serpentis Ophiuchi per Chalyb. | 41 53 $\frac{1}{6}$ |
| per Volub. | 41 53 $\frac{1}{4}$ |
| per Sext. | 41 53 |
| Declin. per Armillas | B. 7 48 |

| | |
|--------------------------------|---------------------|
| Inter Vulturem & caput | 38 30 $\frac{1}{2}$ |
| Herculis | 38 30 $\frac{1}{4}$ |
| Inter præced. genu Ophiuchi | 51 51 |
| & lucidam Vulturis | 51 51 $\frac{2}{3}$ |
| Inter eandem in genu Ophi- | 19 31 |
| uchi & boreal. lancem Ω | 19 32 |
| Declin. eius per Armill. | A. 9 37 vtr. |

DIE 14 MARTIJ, MANE.

| | |
|--|---------------------|
| Altit. merid. lucidioris colli Serpentis | |
| Ophiuchi per Volub. | 41 53 $\frac{1}{4}$ |

DIE 15 MARTIJ, VESPERI.

| | |
|----------------------------------|---------------------|
| Alt. merid. finiftri genu Cephei | |
| per Volub. | 41 15 $\frac{3}{4}$ |
| per Q. min. azim. | 41 15 $\frac{1}{2}$ |
| per Chalyb. | 41 15 $\frac{2}{3}$ |

DIE 22 MARTIJ, VESPERI.

| | |
|-------------------------|----------|
| Alt. merid. genu Cephei | |
| per Chalyb. | 41 15 25 |
| per Volub. | 41 15 30 |

DIE 30 MARTIJ, MANE.

| | |
|--------------------------------------|---------------------|
| Sub crepusculo. Pro restituendo loco | |
| finiftri genu Ophiuchi obseruaba- | |
| tur eius distantia | 51 48 $\frac{1}{2}$ |
| a Vulture | 51 49 $\frac{1}{4}$ |

Hæc distantia non conuenit cum ea quæ est obseruata...¹. Ponatur distantia vera 51 51 $\frac{1}{3}$.

| | |
|--------------------------|---------------------|
| Et viceversa idem genu a | 19 43 |
| boreali lance Ω | 19 43 $\frac{2}{3}$ |

| | |
|------------------------------------|---------------------|
| Altitudo finiftri genu Ophiuchi in | |
| Meridiano per Volub. | 24 27 $\frac{1}{2}$ |

DIE 5 SEPTEMBRIS.

| | |
|---------------------|-------------------|
| Declin. oris Pegasi | 8 2 $\frac{2}{3}$ |
| | 8 3 $\frac{1}{3}$ |

Pone 8° 3' B.

DIE 27 SEPTEMBRIS, VESPERI.

| | |
|--------------------------------|--------------------|
| Inter lucidam Coronæ & | |
| Superiorem duarum præce- | 56 7 $\frac{1}{4}$ |
| dentium in \square vrsæ mai. | 56 7 $\frac{1}{2}$ |
| Inferiorem duarum præce- | 56 4 $\frac{3}{4}$ |
| dentium in \square vrsæ mai. | 56 4 $\frac{1}{2}$ |

| | |
|------------------------------------|-------------------------|
| Inferiorem sequentium in \square | |
| vrsæ maioris | 48 24 $\frac{1}{2}$ bis |
| Superiorem sequentium | |
| in \square Vrsæ | 46 18 $\frac{1}{3}$ bis |
| Primam in cauda vrsæ | 41 0 $\frac{1}{3}$ |
| maioris | 41 0 $\frac{1}{2}$ |
| Mediam in cauda vrsæ | |
| maioris | 36 53 bis |
| Vltimam in cauda vrsæ | 30 35 |
| maioris | 30 35 $\frac{1}{4}$ |
| Inter Capellam & | |
| Illam in collo Vrsæ | 38 38 $\frac{1}{6}$ |
| maioris | 38 38 |
| Illam in armo vrsæ | 41 37 $\frac{5}{6}$ |
| maioris | 41 37 |
| Illam in naribus vrsæ | 31 31 $\frac{1}{3}$ |
| maioris | 31 31 $\frac{2}{4}$ |

In Perseo

DIE 9 OCTOBRIS, VESPERI.

| | |
|------------------------------|---------------------|
| Mag. Inter caput Andromedæ & | |
| 4 14 in capite Medusæ | 37 33 |
| | 37 33 $\frac{1}{2}$ |
| 23 Persei in finiftro | |
| femore | 47 39 bis |
| 5 22 Persei ad clunes | 45 12 bis |
| 3 10 Persei ² | 44 53 $\frac{1}{2}$ |
| | 44 53 $\frac{1}{3}$ |
| 2 Lucidam in latere | 42 8 |
| Persei | 42 8 $\frac{1}{2}$ |
| 3 3 in dextra scapula | 40 10 $\frac{3}{4}$ |
| Persei | 40 11 |
| 3 26 in finiftro pede | 48 10 |
| Persei | 48 10 $\frac{1}{6}$ |
| 4 25 in finiftro calcaneo | 46 2 |
| Persei | 46 2 $\frac{1}{2}$ |
| 4 24 in tibia finiftra | 48 32 $\frac{3}{4}$ |
| Persei | 48 33 |

Vice versa.

| | |
|-----------------------|---------------------|
| Inter Capellam & | |
| 3 Tertiam in dextra | 22 20 $\frac{1}{2}$ |
| scapula Persei | 22 21 |
| 2 Lucidam in latere | 19 5 $\frac{1}{2}$ |
| Persei | 19 5 $\frac{3}{4}$ |
| 3 10 in dextro latere | 16 3 $\frac{1}{2}$ |
| Persei | 16 4 |
| 22 ad clunes Persei | 16 40 |
| | 16 40 $\frac{1}{2}$ |

¹ Valde difficile lectu, ad imam paginam. Cf. supra, ad diem 12 Martii.

² Adscriptum est in margine ad præcedentes quatuor stellas: »Non respondent operationi vt plurimum«.

| | |
|-------------------------|---------------------|
| 23 Perfei | 15 33 |
| | 15 33 $\frac{1}{2}$ |
| 24 in tibia Perfei | 17 50bis |
| 25 in sinistro calcaneo | 22 26 $\frac{3}{4}$ |
| Perfei | 22 27 |
| 26 lucidiorem in pede | 21 15 $\frac{5}{6}$ |
| sinistro Perfei | 21 16 |
| Capitis Medusæ 14 | 25 8 |
| | 25 8 $\frac{1}{2}$ |

Declinationes stellarum
per Armillas in Perfeo.

| Num. | | |
|------|-----------------------------|---------------------|
| 14 | Præcedentium inferioris | |
| | in capite Medusæ | 37 12bis |
| 7 | Lucidæ quæ est in dex- | 48 21 |
| | tro latere, 2 Mag. | 48 21 $\frac{1}{4}$ |
| 10 | Eius quæ est in coxen- | 46 25 |
| | dice dextra | 46 24 $\frac{1}{2}$ |
| 3 | Eius quæ est in humero | 51 50 |
| | dextro | 51 50 $\frac{1}{2}$ |
| 23 | Eius quæ est supra | 38 44 |
| | genu finistrum ¹ | 38 44 $\frac{1}{2}$ |
| 26 | Eius quæ est in talo | 30 36 |
| | sinistri pedis | 30 36 $\frac{5}{6}$ |
| 25 | Eius quæ est in calcaneo | |
| | Perfei | 30 58 |
| 24 | Eius quæ est in tibia | |
| | Perfei | 34 33 |
| 23 | Eius quæ est in femore | 38 46bis |
| 22 | Eius quæ est ad clunes | |
| | Perfei | 41 13 $\frac{1}{6}$ |
| 14 | In capite Medusæ seq. | |
| | lucidiß. cap. | 37 12bis |

DIE 10 OCTOBRIS, VESPERI.

| | | |
|----|---------------------------|---------------------|
| 10 | Declin. lucidæ in flexura | |
| | lateris Perfei | 46 25 $\frac{1}{2}$ |
| 7 | Eius quæ est in latere | |
| | dextro Perfei | 48 21 |
| 3 | Eius quæ est in dextro | |
| | humero Perfei | 51 51 |

DIE 21 NOUEMBRIS, VESPERI.

Pro examinatione Volubilis
denuo rectificati & Chalybei.

| | Alt. Merid. | per Chal. | per Vol. | Diff. |
|--------------------|---------------------|---------------------|-----------------|-------|
| Capitis Androm. | 60 56 $\frac{1}{6}$ | 60 55 | 1 $\frac{1}{6}$ | |
| Extrem. alæ Pegasi | 47 0 $\frac{1}{4}$ | 46 59 $\frac{3}{4}$ | 30" | |

| | | | |
|--------------------|-------|---------------------|-----|
| Luc. in cauda Ceti | 13 55 | 13 54 $\frac{1}{6}$ | 50" |
| Med. in cauda vrf. | | | |
| mai. | 23 3 | 23 2 5" | |

DIE 23 NOUEMBRIS.

| | Alt. Merid. | per Chal. | per Vol. |
|----------------------|---------------------|---------------------|----------|
| Præced. seq. duarum | | | |
| in □ vrfæ maioris | 21 55 | 21 54 $\frac{1}{6}$ | |
| Capitis Androm. | 60 56 | 60 55 | |
| Extr. alæ Pegasi | 47 0 $\frac{1}{4}$ | 46 59 | |
| Præced. in extrem. | | | |
| caudæ Ceti | 22 45 $\frac{1}{4}$ | 22 44 $\frac{1}{6}$ | |
| Luc. cinguli Androm. | 67 30 $\frac{5}{6}$ | 67 30 | |
| Luc. in ventre Ceti | 16 1 $\frac{3}{4}$ | 16 1 55 | |
| per Sext. | 16 2 | | |

DIE 29 NOUEMBRIS, VESPERI.

| | | |
|------------------------------------|---------------------|--|
| Alt. merid. Lucidæ cinguli Androm. | | |
| per Chalyb. | 67 30 $\frac{5}{6}$ | |
| per Volub. | 67 30 $\frac{3}{4}$ | |
| Alt. min. mediæ in cauda vrf. mai. | | |
| per Chalyb. | 23 2 | |
| per Volub. | 23 2 $\frac{1}{4}$ | |
| Eius in cuspidē Trianguli | | |
| per Chalyb. | 61 36 $\frac{5}{6}$ | |
| per Volub. | 61 38 $\frac{1}{6}$ | |

DIE 3 DECEMBRIS.

| | | |
|--------------------------------|---------------------|--|
| Alt. merid. præced. in cuspidē | | |
| trianguli per Chal. | 61 37 $\frac{1}{2}$ | |
| per Vol. | 61 38 $\frac{1}{6}$ | |

Ad septentrionem.

| | | |
|------------------------------------|---------------------|--|
| Alt. mer. lucidæ in □ vrfæ minoris | | |
| per Chal. | 41 43 $\frac{2}{3}$ | |
| per Vol. | 41 44 $\frac{1}{6}$ | |
| Alt. mer. sequentis minus | | |
| lucidæ in □ vrfæ minoris | | |
| per Chalyb. | 39 12 $\frac{3}{4}$ | |
| per Volub. | 39 12 $\frac{1}{4}$ | |

DIE 4 DECEMBRIS, VESPERI.

| | | |
|------------------------------------|---------------------|--|
| Inter præcedentem seu informem ca- | | |
| pitis Medusæ & | 27 52 | |
| Capellam, 5 magn. alt. | 27 52 $\frac{1}{4}$ | |
| Inter 15 in capite Medusæ & | | |
| Capellam | 25 40 | |
| Inter 14 in cap. Medusæ & | 23 7 $\frac{1}{2}$ | |
| lucid. cinguli Androm. | 23 8 | |

¹ Adscriptum est in margine »vide meliorem hic infra«.

| | |
|--------------------------------|---------------------|
| Inter 13 in cap. Med. & | 24 16 |
| lucid. cing. Androm. | 24 16 $\frac{1}{2}$ |
| Inter 24 Perfei & | 34 6 $\frac{1}{2}$ |
| lucid. cinguli Androm. | 34 6 |
| Inter superiorem ped. | 38 19 $\frac{5}{8}$ |
| Ericht. & lucid. ∇ | 38 21 |
| Alt. mer. 11 Perfei per Volub. | 77 20 $\frac{1}{4}$ |
| Alt. mer. 6 Perfei per Volub. | 82 2 |

DIE 16 DECEMBRIS.

Obferuatio afterifmi Trianguli.

| | |
|---|------------------------|
| Inter extremam alæ Pegafi & eam quæ eft in cuspide Trianguli num. 1 | 27 4 $\frac{1}{2}$ bis |
|---|------------------------|

| | |
|---|---------------------|
| Inter extremam alæ Pegafi & superiorem in bafi | 32 38 $\frac{1}{2}$ |
| Trianguli num. 2 | 32 39 |
| Inter extremam alæ Pegafi & inferiorem duarum | 33 33 $\frac{2}{3}$ |
| in bafi trianguli | 33 34 $\frac{1}{2}$ |

DIE . . . DECEMBRIS.

| | |
|---|---------------------|
| Lucida Perfei in max. alt. | |
| per Chalyb. | 82 23 $\frac{5}{8}$ |
| per Volub. | 82 24 |
| Alt. mer. lucidioris eius quæ eft in coxidice dextra | |
| per Chalyb. | 80 28 $\frac{1}{8}$ |
| per Volub. | 80 28 $\frac{1}{2}$ |

OBSERVATIONES STELLARUM EXTRA
ZODIACUM AUSTRALIUM.

DIE 3 JANUARIJ, VESPERI.

| | |
|---|---------------------|
| Alt. merid. inferioris lucidarum in ca- pite Ceti per Volub. | 32 37 $\frac{1}{2}$ |
| per Chal. | 32 37 |
| per Sext. | 32 37 |
| Sequentis earundem | |
| per Volub. | 35 33 $\frac{1}{8}$ |
| per Chalyb. | 35 34 |
| per Sext. | 35 33 $\frac{5}{8}$ |

DIE 7 JANUARIJ, MANE.

| | |
|--|---------------------|
| Inferior duarum præceden- tium in \square Corui in Merid. | |
| per Volub. | 13 48 $\frac{5}{8}$ |
| per Chal. | 13 50 |
| per Sext. | 13 49 |
| Sequens duarum per Volub. | 18 52 $\frac{1}{2}$ |
| per Chalyb. | 18 53 |
| per Sext. | 18 53 |
| Lucida caudæ Hydræ | |
| per Volub. | 13 10 |
| per Chalyb. | 13 11 |
| per Sext. | 13 10 $\frac{1}{8}$ |

DIE 8 JANUARIJ, VESPERI.

| | |
|--|---------------------|
| Diftantia inter Canem maiorem & Caput Leporis | 22 10 $\frac{1}{4}$ |
| Extremam pedis Leporis | 24 14 |
| | 24 14 $\frac{1}{8}$ |

| | |
|-------------------------------------|-------------------------|
| Dorsum Leporis | 17 23 $\frac{2}{3}$ bis |
| Eam in ventre | 18 44 |
| Leporis | 18 44 $\frac{1}{8}$ |
| Aufr. 2 in posterioribus pedibus | 15 25 $\frac{1}{2}$ bis |
| Borealiorem earundem | 13 31 $\frac{1}{4}$ |
| semel propter nubes. | |
| Declin. eius quæ eft | 16 42 $\frac{1}{2}$ |
| in capite Leporis | 16 42 $\frac{2}{3}$ |

DIE 11 JANUARIJ, VESPERI.

| | | |
|-------------------------------------|----------|----------|
| Altit. duarum lucidiorum in exuuiis | | |
| Orionis præcedentis | 40 16 | |
| Sequentis per Volub. | 38 56½ | |
| Primæ in Eridano | Altitudo | Declin. |
| per Chal. | 28 25⅓ | vno/alt. |
| per Vol. | 28 25⅔ | 5 40 |
| per Sext. | 28 26⅓ | 5 39⅔ |
| Siniftri pedis Orion. | | |
| per Vol. | 25 21⅓ | 8 43 |
| per Sext. | 25 22½ | 8 42½ |
| per Chal. | 25 23⅓ | |
| Mural. | 25 21⅔ | vtroq. |
| Præced. humeri Orion. | | |
| per Sext. | 40 0⅓ | 5 55 |
| per Vol. | 40 0 | 5 55⅓ |
| per Chal. | 40 0 5" | |
| Mural. | 40 0 | |
| alt. pin. | 39 59¾ | |

Primæ in cingulo Orion.

| | | |
|-----------|---------------------|--------------------|
| Mural. | 33 25 $\frac{3}{4}$ | 0 39 $\frac{1}{2}$ |
| per Vol. | 33 25 $\frac{1}{3}$ | 0 39 $\frac{1}{3}$ |
| per Chal. | 33 26 $\frac{1}{6}$ | |
| per Sext. | 33 26 $\frac{1}{2}$ | |

Mediæ in cingulo

| | | |
|-----------|---------------------|--------------------|
| per Vol. | 32 33 $\frac{1}{2}$ | 1 31 $\frac{1}{2}$ |
| per Sext. | 32 34 $\frac{1}{6}$ | 1 31 $\frac{1}{3}$ |
| per Chal. | 32 34 $\frac{1}{3}$ | |
| Mural. | 32 34 | |

Vltimæ in cing.

| | | |
|-----------|-------|--------------------|
| per Vol. | 31 52 | 2 12 $\frac{1}{2}$ |
| per Sext. | 31 53 | 2 12 $\frac{5}{6}$ |
| per Chal. | 31 53 | |
| Mural. | 31 52 | |

Dextri pedis

| | | |
|-----------|---------------------|--------------------|
| per Chal. | 24 14 $\frac{5}{6}$ | 9 51 $\frac{2}{3}$ |
| per Sext. | 24 13 $\frac{2}{3}$ | 9 51 $\frac{1}{3}$ |
| per Vol. | 24 13 $\frac{1}{2}$ | |
| Mural. | 24 13 | |

alt. pin. 24 13 $\frac{1}{3}$

Luc. humer. Orion.

| | | |
|-----------|---------------------|--------------------|
| per Sext. | 41 20 $\frac{1}{4}$ | 7 17 |
| per Chal. | 41 21 | 7 17 $\frac{1}{3}$ |
| per Vol. | 41 21 | |
| Mural. | 41 21 vtroq. | |

Præcedentis pedis Canis maioris Alt.

| | | |
|------------------|---------------------|--|
| merid. per Sext. | 16 19 | |
| per Vol. | 16 18 $\frac{2}{3}$ | |
| per Chal. | 16 19 $\frac{1}{2}$ | |

Luc. Can. mai. per Volub.

| | | |
|-------------|---------------------|--|
| per Sext. | 17 54 $\frac{2}{3}$ | |
| per Chalyb. | 17 55 | |
| | 17 55 $\frac{1}{6}$ | |

Decl. luc. Can. mai.

alt. 16 10 $\frac{1}{4}$

| | | |
|---------------------|-----------|--------------------|
| Alt. inf. siue auf. | per Vol. | 5 45 $\frac{1}{2}$ |
| ped. Can. mai. | per Sext. | 5 45 $\frac{1}{2}$ |

Sequentis in pede posteriori

| | | |
|-----------------------|--------------------|--|
| Canis mai. per Volub. | 8 21 $\frac{1}{2}$ | |
| per Chalyb. | 8 23 $\frac{1}{3}$ | |
| per Sext. | 8 23 | |
| per Mural. | 8 22 | |

DIE 6 FEBRUARIJ.

Alt. siniftri pedis Orionis

| | | |
|-------------|---------------------|--|
| per Volub. | 25 21 | |
| per Chalyb. | 25 22 $\frac{1}{3}$ | |
| per Q. Min. | 25 22 $\frac{2}{4}$ | |
| per Sext. | 25 22 | |

DIE 9 FEBRUARIJ.

Alt. mer. siniftri humeri Orionis

| | | |
|--------------------------|---------------------|--|
| per Q. Chalyb. | 40 0 | |
| per Sext. nou. | 39 59 $\frac{2}{3}$ | |
| Dextri pedis per Volub. | 24 12 $\frac{2}{3}$ | |
| Dextri humeri per Volub. | 41 21 | |

DIE 10 FEBRUARIJ.

Siniftri pedis

| | | |
|----------------|---------------------|--|
| per Volub. | 25 22 $\frac{1}{3}$ | |
| per Chalyb. | 25 22 $\frac{1}{6}$ | |
| per Sext. vet. | 25 22 | |

Sin. humeri

| | | |
|----------------|---------------------|--|
| per Volub. | 40 0 | |
| per Sext. vet. | 39 59 $\frac{5}{6}$ | |

Primæ balthei

| | | |
|----------------|---------------------|--|
| per Chalyb. | 33 25 $\frac{1}{2}$ | |
| per Sext. vet. | 33 25 | |

Secundæ

| | | |
|----------------|---------------------|--|
| per Volub. | 32 33 | |
| per Chalyb. | 32 33 $\frac{5}{6}$ | |
| per Sext. vet. | 32 33 $\frac{1}{4}$ | |
| per Mural. | 32 33 $\frac{3}{4}$ | |

Tertiæ

| | | |
|----------------|---------------------|--|
| per Volub. | 31 50 | |
| per Chalyb. | 31 52 $\frac{1}{6}$ | |
| per Sext. vet. | 31 51 | |
| per Mural. | 31 52 | |

Dextri pedis

| | | |
|----------------|--------------------------|--|
| per Volub. | 24 13 $\frac{1}{6}$ | |
| per Chalyb. | 24 14 | |
| per Sext. vet. | 24 13 | |
| per Mural. | fere 24 13 $\frac{1}{2}$ | |

Dext. hum.

| | | |
|----------------|---------------------|--|
| per Volub. | 41 21 | |
| per Chalyb. | 41 20 $\frac{1}{6}$ | |
| per Sext. vet. | 41 21 | |
| per Mural. | 41 20 $\frac{2}{3}$ | |

Declinationes

vno pin.

altero

| | | |
|------------------|-----------------------|--------------------|
| Siniftri pedis | M. 8 42 $\frac{1}{2}$ | 8 42 $\frac{1}{2}$ |
| Siniftri humeri | B. 5 54 $\frac{1}{2}$ | 5 54 $\frac{1}{4}$ |
| Primæ in cingulo | M. 0 40 $\frac{1}{4}$ | 0 40 |
| Secundæ | M. 1 31 $\frac{2}{3}$ | 1 31 $\frac{3}{4}$ |
| Tertiæ | M. 2 13 $\frac{1}{2}$ | 2 13 $\frac{3}{4}$ |
| Dextri humeri | B. 7 15 $\frac{1}{2}$ | 7 15 $\frac{1}{2}$ |
| Dextri pedis | M. 9 52 | 9 52 $\frac{1}{4}$ |

Dist. inter sin. humerum Ori-

onis & Canem minorem 33 27 $\frac{1}{4}$ bisInter dext. hum Orion. & 26 2 $\frac{1}{3}$ Can. min. per Sext. nou. 26 2 $\frac{1}{2}$

DIE 11 FEBRUARIJ.

| Luc. γ occ. | Media balth. Orion. occ. | Diff. Asc. R. |
|--------------------|-----------------------------|--------------------|
| 66 $42\frac{1}{2}$ | 13 $52\frac{3}{4}$ | 52 $49\frac{3}{4}$ |
| 67 $23\frac{1}{2}$ | 14 35 | 52 $48\frac{1}{2}$ |
| 67 $52\frac{1}{2}$ | 15 $3\frac{1}{2}$ | 52 49 |
| Can. min. or. | Pone hic | 52 $49\frac{1}{6}$ |
| 15 9 | 15 $25\frac{1}{2}$ | 30 $34\frac{1}{2}$ |
| 14 $47\frac{1}{2}$ | 15 $48\frac{1}{4}$ | 30 $35\frac{3}{4}$ |
| 14 $16\frac{1}{2}$ | 16 $18\frac{3}{4}$ | 30 $35\frac{1}{4}$ |
| | Pone hic | 30 $35\frac{1}{4}$ |

DIE 12 FEBRUARIJ, VESPERI.

| | |
|-------------------------------|---------------------|
| Alt. mer. Sin. humeri Orionis | |
| per Q. Volub. | 40 0 |
| per Min. port. | 40 0 |
| per Chal. | 40 $0\frac{1}{4}$ |
| Primæ in cingulo per Volub. | 33 $23\frac{1}{2}$ |
| per Min. port. | 33 $25\frac{1}{2}$ |
| | vel $25\frac{3}{4}$ |
| per Chalyb. | 33 $25\frac{3}{4}$ |
| Mediæ per Volub. | 32 33 |
| per Min. port. | 32 $34\frac{1}{2}$ |
| | vel $34\frac{1}{6}$ |
| per Chalyb. | 32 $34\frac{1}{2}$ |
| per Sext. nou. | 32 $33\frac{3}{4}$ |
| Tertiæ per Volub. | 31 51 |
| per Min. port. | 31 $52\frac{3}{4}$ |
| per Chalyb. | 31 $52\frac{3}{4}$ |
| per Sext. nou. | 31 $52\frac{1}{4}$ |
| Dextri pedis per Volub. | 24 13 |
| per Min. port. | 24 $12\frac{3}{4}$ |
| per Chalyb. | 24 $14\frac{1}{2}$ |
| Dextri humeri per Volub. | 41 $20\frac{2}{3}$ |
| per Min. port. | 41 $20\frac{1}{4}$ |
| per Chalyb. | 41 $20\frac{1}{2}$ |
| per Sext. nou. | 41 $21\frac{1}{4}$ |

DIE 15 FEBRUARIJ.

| | |
|------------------------------------|--------------------|
| Alt. merid. finiftri pedis Orionis | |
| per Q. Volub. | 25 $20\frac{2}{3}$ |
| Siniftri humeri Orionis | |
| per Q. Volub. | 40 0 |
| per Min. port. | 40 $0\frac{1}{4}$ |
| per Chalyb. | 40 $0\frac{1}{4}$ |
| Primæ in cingulo | |
| per Min. port. | 33 26 |
| per Chalyb. | 33 $25\frac{2}{3}$ |
| per Sext. nou. | 33 25 |

| | |
|------------------------------|--------------------|
| Mediæ per Min. port. | 32 $34\frac{1}{2}$ |
| per Chalyb. | 32 $34\frac{2}{3}$ |
| per Sext. nou. | 32 $33\frac{3}{4}$ |
| Postremæ per Min. port. | 31 $53\frac{1}{2}$ |
| per Chalyb. | 31 53 |
| per Sext. nou. | 31 $52\frac{1}{6}$ |
| Dextri pedis per Min. port. | 24 $13\frac{3}{4}$ |
| per Chalyb. | 24 $14\frac{2}{3}$ |
| per Sext. nou. | 24 $14\frac{1}{2}$ |
| Dextri humeri per Min. port. | 41 $21\frac{1}{2}$ |
| per Chalyb. | 41 $21\frac{1}{6}$ |
| per Sext. nou. | 41 $21\frac{2}{3}$ |

DIE 15 MARTIJ.

| | |
|--------------------------|--------------------|
| Alt. merid. Lucidæ Hydræ | |
| per Q. Volub. | 27 $11\frac{5}{6}$ |
| per Q. Min. azim. | 27 11 |
| per Chalyb. | 27 $11\frac{5}{6}$ |
| per Muralem, nouo | 27 $11\frac{1}{2}$ |
| vet. | 27 11 |

DIE 22 MARTIJ.

| | |
|------------------------|----------|
| Alt. merid. Luc. Hydræ | |
| per Volub. | 27 11 30 |
| per Chalyb. | 27 11 25 |

DIE 1 NOUEMBRIS.

| | |
|---|------------------------|
| Inter luc. mand. Ceti & luc. caudæ eiusdem pro loco stellæ luc. in cauda Ceti | 40 $44\frac{1}{4}$ bis |
|---|------------------------|

DIE 21 NOUEMBRIS.

| | |
|------------------------------|--------------------|
| Luc. in cauda Ceti per Chal. | 13 55 |
| per Volub. | 13 $54\frac{1}{6}$ |

DIE 23 NOUEMBRIS.

| | |
|-------------------------------|-------------------|
| Luc. in ventre Ceti per Chal. | 16 $1\frac{2}{3}$ |
| per Volub. | 16 1 55 |
| per Sext. | 16 2 |

DIE 29 NOUEMBRIS.

| | |
|-------------------------------|--------------------|
| Alt. mer. caudæ Ceti per Vol. | 13 54 5 |
| per Chalyb. | 13 $54\frac{5}{6}$ |
| per Sext. nou. | 13 $53\frac{5}{6}$ |

DIE 3 DECEMBRIS.

| | |
|---|--------------------|
| Sequentis seu mediæ in man- dibula Ceti per Volub. | 35 $34\frac{2}{3}$ |
| per Chalyb. | 35 $34\frac{1}{4}$ |
| Tertiæ & luc. mandibulæ | |
| per Volub. | 36 $31\frac{5}{6}$ |
| per Chalyb. | 36 $32\frac{1}{2}$ |

DIE 4 DECEMBRIS.

| | |
|------------------------------|---------------------|
| Inter mediam balthei Orionis | |
| num. 27 & | 38 47 |
| lucidam mandibulæ Ceti | 38 46 $\frac{2}{3}$ |
| Inter luc. mand. Ceti & | 40 1 $\frac{1}{6}$ |
| 28 in baltheo | 40 1 $\frac{1}{4}$ |
| 29 in manubrio | 36 7 $\frac{1}{4}$ |
| gladij | 36 7 $\frac{2}{3}$ |
| dextrum pedem | 43 26 |
| Orionis num. 38 | 43 26 $\frac{1}{4}$ |
| 32 in ense Orionis | 39 30 |
| | 39 29 $\frac{2}{3}$ |
| 31 in Orione | 39 19 $\frac{1}{2}$ |
| | 39 20 $\frac{2}{3}$ |
| 22 in clipeo | 26 51 bis |
| 23 in clipeo | 27 10 |
| | 27 11 |
| 24 in clipeo | 28 0 bis |
| 25 in clipeo | 29 1 bis |
| Inter Canem Minorem & | 42 9 $\frac{1}{2}$ |
| 22 Orionis | 42 10 |

| | | |
|----------------------|---------------------|---------------------|
| 23 | | 41 43 |
| | | 41 44 |
| 24 | | 41 20 |
| | | 41 20 $\frac{3}{4}$ |
| eam quæ est in | | |
| | manubrio Or. | 34 37 bis |
| 30 | | 31 5 $\frac{1}{2}$ |
| | | 31 6 |
| 28 in baltheo | | 30 35 $\frac{1}{4}$ |
| Alt. Merid. | per Volub. | per Chalyb. |
| 5 in Eridano | | 30 2 $\frac{3}{4}$ |
| 22 Orionis | 40 16 $\frac{2}{3}$ | 40 16 $\frac{1}{6}$ |
| 23 | 38 55 | 38 55 $\frac{1}{4}$ |
| 24 | 35 49 $\frac{2}{3}$ | |
| 25 | 35 6 | |
| 29 in manubrio enfis | | |
| Orion. | 31 15 $\frac{2}{3}$ | |
| 32 in ense | 27 50 | 27 51 |
| 31 | 28 22 | |
| 28 cinguli | 31 51 $\frac{2}{3}$ | 31 53 |
| 38 in dextro pede | 24 13 $\frac{1}{2}$ | |

PRO REFRACTIONIBUS STELLARUM FIXARUM
INDAGANDIS.

DIE 10 JANUARIJ, VESPERI.

| Declin. Arcturi | | Altit. eius |
|---------------------|---------------------|---------------------------------|
| vno pinn. | altero | |
| 21 37 $\frac{1}{2}$ | ... | 2 20 |
| 21 36 | 21 35 | 2 56 |
| 21 32 $\frac{2}{3}$ | 21 32 $\frac{2}{3}$ | 3 0 dubia alt. |
| 21 31 $\frac{1}{3}$ | 21 31 $\frac{1}{2}$ | 3 50 |
| 21 30 $\frac{2}{3}$ | 21 31 $\frac{1}{4}$ | 4 $\frac{1}{2}$ per coniecturam |
| 21 28 $\frac{1}{3}$ | 21 28 $\frac{2}{3}$ | 6 10 |
| 21 27 $\frac{3}{4}$ | 21 28 | 8 13 |

Vera 21 23 ex altitudine.

Altit. Lyræ minima per Volub.
4 32 $\frac{1}{4}$

DIE 11 JANUARIJ.

| | Declinatio | Altit. |
|-------------------|-------------------------|--|
| Canis min. | 6 11 $\frac{1}{2}$ | 6 12 11 16 $\frac{1}{2}$ |
| | 6 12 | 6 11 $\frac{2}{3}$ 12 30 $\frac{1}{2}$ |
| Ceruicis Ω | 22 1 | 22 0 $\frac{2}{3}$ 6 26 |
| | 22 0 $\frac{2}{3}$ * | 21 59 $\frac{1}{2}$ * 8 14 |
| | * Incerta propter nubes | |
| Oculi γ | 15 38 | 15 38 $\frac{1}{4}$... |

| | | | |
|-----------|---------------------|--------------------|-----------------|
| Can. mai. | 16 5 | 16 4 $\frac{1}{2}$ | 5 58 |
| | 16 5 | 16 4 $\frac{1}{3}$ | 6 16 |
| Arcturi | 22 29 $\frac{2}{3}$ | 22 29 | 4 30 per Minim. |

DIE 29 JANUARIJ.

| | Azim. γ or. | Alt. γ | Declin. γ | alt. |
|---------------------|--------------------|--------------------|--------------------|-------------------|
| | 101 44 | 0 56 $\frac{1}{2}$ | | |
| | 100 18 | 1 4 | 7 16 $\frac{2}{3}$ | |
| H. M. | 99 26 | 2 16 | 7 12 $\frac{1}{2}$ | |
| 7 19 $\frac{1}{2}$ | 98 25 | 2 53 $\frac{1}{3}$ | 7 11 | |
| 7 22 $\frac{1}{3}$ | | | 7 9 $\frac{2}{3}$ | |
| 7 23 | | | | 7 10 |
| 7 26 | 97 9 | 3 44 | 7 9 | 7 9 $\frac{1}{2}$ |
| 7 30 | 96 25 | 4 13 $\frac{1}{2}$ | 7 7 $\frac{1}{2}$ | 7 8 |
| 7 35 $\frac{1}{8}$ | 95 20 | 4 52 | 7 6 $\frac{2}{3}$ | 7 7 |
| 7 40 $\frac{1}{2}$ | 94 24 | 5 31 $\frac{1}{3}$ | 7 5 $\frac{1}{2}$ | 7 6 |
| ... | 93 36 | 6 1 $\frac{1}{2}$ | 7 5 $\frac{1}{3}$ | 7 5 $\frac{1}{2}$ |
| 7 50 $\frac{1}{10}$ | 91 44 | 7 17 $\frac{1}{2}$ | 7 4 $\frac{2}{3}$ | 7 5 |
| 7 57 $\frac{5}{6}$ | 90 56 | 7 46 $\frac{1}{2}$ | 7 3 $\frac{1}{2}$ | 7 4 $\frac{1}{4}$ |
| 8 2 $\frac{1}{2}$ | 90 1 | 8 23 $\frac{1}{2}$ | 7 3 $\frac{1}{3}$ | 7 4 |
| 8 6 $\frac{1}{2}$ | 89 19 | 8 54 | 7 2 $\frac{2}{3}$ | 7 3 $\frac{1}{3}$ |
| 8 13 $\frac{1}{3}$ | 87 58 | 9 49 $\frac{1}{2}$ | 7 3 | 7 3 $\frac{1}{3}$ |

DIE 30 JANUARIJ.

| | | | | | | | |
|--------------------|--------|--------------------|--------------------|--------------------|--|--|--|
| Mane | | | | | | | |
| 1 43 $\frac{2}{3}$ | 5 20 | 40 57 | 7 0 | 6 59 $\frac{1}{2}$ | | | |
| 1 46 $\frac{1}{2}$ | 4 14 | 41 0 $\frac{1}{2}$ | 7 0 | 7 0 $\frac{1}{2}$ | | | |
| 1 56 $\frac{1}{2}$ | 2 16 | 41 1 $\frac{1}{2}$ | 7 0 | | | | |
| ... | 1 17 | 41 3 | 7 0 | 7 0 | | | |
| Vesper | | | | | | | |
| 7 8 $\frac{2}{3}$ | 101 0 | 1 19 $\frac{1}{2}$ | 7 20 $\frac{3}{4}$ | | | | |
| 7 12 $\frac{1}{2}$ | 100 11 | 1 49 | 7 18 | | | | |
| 7 18 | 99 6 | 2 17 | 7 14 | | | | |
| 7 21 | 98 26 | 2 54 | 7 13 $\frac{1}{2}$ | | | | |
| 7 29 | 96 50 | 3 56 | 7 10 | 7 10 $\frac{1}{2}$ | | | |
| 7 32 $\frac{1}{2}$ | 96 7 | 4 26 | 7 9 $\frac{1}{3}$ | 7 10 | | | |
| 7 36 $\frac{1}{2}$ | 95 20 | 4 55 $\frac{1}{2}$ | 7 9 | 7 9 $\frac{1}{2}$ | | | |

DIE 29 JANUARIJ.

Obferuabatur Arcturus pro refractione.

| Vesper | Azim. | Alt. | Declinatio | |
|---------------------|--------|---------------------|---------------------|---------------------|
| | | | vno pin. | altero |
| 8 35 $\frac{5}{8}$ | 125 38 | 2 51 | 21 35 $\frac{1}{4}$ | 21 35 $\frac{1}{2}$ |
| 8 42 | 124 20 | 3 5 | 21 34 $\frac{1}{4}$ | 21 33 $\frac{3}{8}$ |
| | dub. f | | | |
| 8 46 $\frac{1}{2}$ | 123 34 | 3 59 | 21 32 $\frac{3}{4}$ | 21 32 $\frac{1}{2}$ |
| 8 53 $\frac{1}{3}$ | 122 16 | 4 40 $\frac{1}{3}$ | | |
| 9 14 $\frac{2}{3}$ | 118 9 | 7 5 | 21 28 $\frac{1}{2}$ | 21 28 |
| 9 20 $\frac{1}{2}$ | 117 9 | 7 42 $\frac{1}{4}$ | 21 27 $\frac{1}{2}$ | 21 28 |
| 9 24 $\frac{2}{3}$ | 116 20 | 8 13 | 21 27 $\frac{1}{2}$ | 21 28 $\frac{1}{2}$ |
| 9 40 $\frac{1}{6}$ | 113 25 | 10 3 $\frac{1}{3}$ | 21 27 | 21 27 $\frac{1}{4}$ |
| 10 8 | | 13 30 | 21 27 | 21 26 $\frac{1}{2}$ |
| | dub. f | | | |
| 10 19 $\frac{1}{2}$ | 105 55 | 15 0 | 21 26 | 21 25 $\frac{1}{2}$ |
| 10 44 $\frac{1}{3}$ | 101 28 | 18 13 | 21 25 | 21 24 $\frac{2}{3}$ |
| 10 53 $\frac{1}{2}$ | 99 36 | 19 26 $\frac{2}{3}$ | 21 24 $\frac{1}{3}$ | 21 25 |
| 11 0 | 98 20 | 20 19 $\frac{1}{2}$ | 21 24 | 21 24 $\frac{1}{2}$ |
| 11 11 $\frac{1}{2}$ | 96 7 | 21 51 | 21 24 | 21 23 $\frac{2}{3}$ |
| 12 3 | 86 5 | 28 40 $\frac{1}{3}$ | 21 23 $\frac{1}{2}$ | |
| 12 9 $\frac{1}{3}$ | | | 21 23 $\frac{1}{2}$ | |
| 12 17 | | 31 0 | 21 23 | 21 23 $\frac{1}{2}$ |
| 12 30 $\frac{2}{3}$ | 66 11 | 40 21 | 21 22 $\frac{1}{2}$ | 21 23 |
| 12 35 $\frac{1}{3}$ | 65 28 | 40 42 | | |

Spicæ ♄, verſus ortum.

| | | | | |
|---------------------|-------|--------------------|--------------------|--------------------|
| 11 49 | 59 45 | 8 33 $\frac{1}{2}$ | 8 53 | |
| 11 54 | 58 41 | 9 8 | 8 53 $\frac{1}{2}$ | 8 54 |
| 11 58 $\frac{2}{3}$ | 57 42 | 9 39 $\frac{1}{2}$ | 8 54 | 8 53 $\frac{2}{3}$ |
| | 30 9 | 20 59 | 8 56 $\frac{1}{2}$ | 8 56 $\frac{1}{3}$ |
| | 29 25 | 21 10 | 8 57 | 8 56 $\frac{1}{3}$ |

Item Lucida ♀ etiam obſeruabatur verſus occaſum inclinans ad Hori-

zontem pro verificatione inſtrumenti, & præcedentium obſervationum quæ verſus ortum fiebant examinatione.

| Hæc obſervatio fiebat circiter horam 11 $\frac{1}{2}$ | Alt. | Declinatio | | |
|---|------|---------------------|-------|--|
| | 9 40 | 21 31 $\frac{1}{3}$ | 21 31 | |
| | 9 0 | 21 31 $\frac{2}{3}$ | 21 32 | |
| | 8 30 | 21 32 $\frac{1}{4}$ | | |

DIE 30 JANUARIJ, VESPERI.

| Caudæ ♄ | Azim. | Alt. | Declin. | |
|--------------------|----------|---------------------|--------------------|---------------------|
| | | | vno | alt. |
| 7 45 $\frac{1}{2}$ | 102 28 | 11 40 | 16 55 | 16 55 $\frac{2}{3}$ |
| 7 55 | 101 4 | 12 52 $\frac{1}{2}$ | 16 55 | 16 55 $\frac{2}{3}$ |
| 8 0 | 100 5 | 13 33 $\frac{1}{2}$ | 16 56 | 16 56 $\frac{1}{2}$ |
| 8 7 | 98 43 | 14 18 | 16 56 | 16 56 $\frac{1}{2}$ |
| 6 27 $\frac{1}{3}$ | Cordis ♄ | | 14 0 | 14 0 |
| 6 33 | 95 5 | 13 23 | 14 0 $\frac{1}{2}$ | 14 0 $\frac{1}{2}$ |
| 6 38 $\frac{2}{3}$ | 93 55 | 14 10 $\frac{1}{2}$ | 14 0 $\frac{1}{2}$ | 14 0 $\frac{1}{2}$ |
| 6 42 $\frac{1}{3}$ | 93 11 | 14 43 | 14 0 $\frac{2}{3}$ | 14 0 $\frac{3}{4}$ |
| 6 46 $\frac{1}{3}$ | 92 26 | 15 12 $\frac{1}{2}$ | 14 0 $\frac{2}{3}$ | 14 0 $\frac{3}{4}$ |
| 6 50 $\frac{1}{3}$ | 91 34 | 15 45 | 14 0 $\frac{2}{3}$ | 14 0 $\frac{3}{4}$ |

Eodem die veſperi obſeruabatur Arcturus.

| | | | | |
|--------------------|--------|---------------------|---------------------|---------------------|
| 9 8 $\frac{1}{2}$ | 118 50 | 6 40 | 21 29 | 21 29 $\frac{1}{2}$ |
| 9 15 | 117 31 | 7 26 | 21 28 $\frac{2}{3}$ | 21 29 |
| 9 20 | 116 39 | 7 59 | 21 28 $\frac{1}{2}$ | 21 28 $\frac{1}{4}$ |
| 9 24 $\frac{1}{2}$ | 115 40 | 8 36 $\frac{1}{2}$ | 21 28 | 21 27 $\frac{1}{2}$ |
| 9 31 | 114 21 | 9 26 | 21 27 $\frac{1}{4}$ | 21 27 $\frac{1}{2}$ |
| 9 36 $\frac{1}{2}$ | 113 25 | 10 5 | 21 26 $\frac{1}{2}$ | 21 27 |
| 9 42 | 112 13 | 10 50 | 21 26 $\frac{1}{3}$ | 21 27 |
| 9 46 | 111 31 | 11 17 $\frac{1}{2}$ | 21 26 $\frac{2}{3}$ | 21 26 |

DIE 9 FEBRUARIJ.

| Arcturi | | | | |
|---------|---------------|---------------------|---------------------|--|
| | 3 37 | 21 32 | 21 32 $\frac{1}{3}$ | |
| | 4 15 | 21 32 $\frac{1}{2}$ | 21 33 | |
| | | dubia | | |
| 122 1 | 4 48 | 21 31 | 21 30 $\frac{3}{4}$ | |
| 120 12 | 5 54 | 21 30 | 21 29 $\frac{2}{3}$ | |
| 119 13 | 6 28 | 21 29 | 21 29 $\frac{1}{2}$ | |
| 118 10 | 7 6 | 21 28 $\frac{1}{4}$ | 21 28 $\frac{1}{2}$ | |
| 117 6 | 7 43 | 21 28 | 21 27 $\frac{2}{3}$ | |
| 116 25 | 8 11 | 21 27 $\frac{1}{4}$ | 21 27 $\frac{1}{2}$ | |
| 115 37 | 8 40 | 21 26 $\frac{1}{4}$ | 21 26 $\frac{1}{2}$ | |
| | Per Q. minim. | | | |
| | 12 40 | 21 25 | 21 25 $\frac{1}{2}$ | |
| | Per Q. Volub. | | | |
| 97 16 | 21 1 | 21 24 $\frac{1}{2}$ | 21 25 | |
| 96 8 | 21 50 | 21 24 $\frac{1}{2}$ | 21 25 | |

¹ In margine adſcriptum eſt: »Aurifaber obſervauit declinationem«.

DIE 10 FEBRUARIJ.

| | Azim. | Altit. | Declinatio | |
|------------------------|-------------------|--------|-----------------|--------------------|
| Lucidæ \vee | 16 20 | 21 | $29\frac{1}{3}$ | 21 29 |
| | 15 4 | 21 | 29 | $21 29\frac{1}{2}$ |
| | 14 22 | 21 | 30 | $21 29\frac{2}{3}$ |
| | 13 41 | 21 | $30\frac{1}{2}$ | 21 30 |
| | 12 42 | 21 | 31 | $21 30\frac{1}{2}$ |
| | 12 21 | 21 | $31\frac{1}{4}$ | 21 31 |
| | 9 0 | 21 | $32\frac{1}{4}$ | $21 32\frac{1}{2}$ |
| | 7 49 | 21 | 33 | |
| | 7 10 | 21 | 33 | $21 33\frac{1}{2}$ |
| Arcturi 121 16 | 5 14 | 21 | 30 | $21 30\frac{1}{2}$ |
| 120 32 | 5 $40\frac{1}{2}$ | 21 | $30\frac{1}{2}$ | 21 30 |
| 119 56 | 6 7 | 21 | 30 | $21 29\frac{1}{2}$ |
| 113 13 | 10 15 | 21 | $26\frac{1}{2}$ | $21 26\frac{3}{4}$ |
| 112 41 | 10 33 | 21 | $26\frac{1}{2}$ | $21 26\frac{3}{4}$ |
| 112 0 | 11 0 | 21 | $26\frac{1}{2}$ | 21 26 |
| 111 16 | 11 29 | 21 | 26 | $21 26\frac{1}{2}$ |
| 106 30 | 14 43 | 21 | $24\frac{1}{2}$ | 21 25 |
| 94 46 | 22 48 | 21 | 24 | $21 24\frac{1}{2}$ |
| 92 28 | 24 23 | 21 | $24\frac{1}{3}$ | $21 24\frac{2}{3}$ |
| 91 40 | 24 58 | 21 | $24\frac{1}{2}$ | $21 24\frac{2}{3}$ |
| 73 55 | 36 13 | 21 | $23\frac{3}{4}$ | 21 24 |
| 72 52 | 36 51 | 21 | $23\frac{3}{4}$ | 21 24 |
| 71 56 | 37 15 | 21 | 24 | $21 23\frac{3}{4}$ |
| Lucid. γ 116 50 | 8 2 | 21 | $32\frac{1}{4}$ | |
| 118 15 | 7 22 | 21 | 33 | |
| | 6 0 | 21 | 34 | $21 34\frac{1}{2}$ |
| 121 14 | 5 35 | 21 | 35 | 21 35 |

Quominus vterius obseruari poterat chafmata obftabant.

DIE 12 FEBRUARIJ, VESPERI.

| | Azim. | Altit. | Declinatio | |
|---------------|-------|--------|-----------------|--------------------|
| Lucidæ \vee | 12 50 | 21 | 30 | $21 30\frac{1}{2}$ |
| | 12 0 | 21 | 31 | $21 30\frac{1}{4}$ |
| | 10 55 | 21 | $31\frac{1}{6}$ | $21 31\frac{1}{3}$ |

Ad occafum

Lucidæ Vulturis per Q. Chalyb.

| Altit. | Declinatio | |
|-------------------|-------------------|-------------------|
| | vno | altero |
| 13 55 | 7 $53\frac{1}{2}$ | 7 54 |
| 8 15 | 7 $54\frac{1}{2}$ | 7 $54\frac{3}{4}$ |
| 7 30 | 7 $55\frac{1}{3}$ | 7 $55\frac{3}{4}$ |
| 6 $40\frac{1}{2}$ | 7 $55\frac{3}{4}$ | 7 56 |
| Per Q. min. | | |
| 4 40 | 7 $59\frac{1}{2}$ | 7 $59\frac{1}{4}$ |

| | | | | |
|----------------|-------|----|-----------------|--------------------|
| | 7 20 | 21 | 33 | $21 33\frac{1}{2}$ |
| | 6 40 | 21 | $33\frac{3}{4}$ | 21 34 |
| Arcturi 121 22 | 5 11 | 21 | $30\frac{1}{2}$ | 21 30 |
| 120 35 | 5 38 | 21 | $29\frac{1}{2}$ | 21 30 |
| 119 26 | 6 19 | 21 | $28\frac{3}{4}$ | $21 28\frac{3}{4}$ |
| 118 42 | 6 41 | 21 | 28 | $21 28\frac{1}{2}$ |
| | 8 40 | 21 | $27\frac{1}{2}$ | 21 27 |
| | 16 5 | 21 | $25\frac{1}{2}$ | 21 25 |
| | 17 0 | 21 | 25 | $21 24\frac{2}{3}$ |
| | 18 40 | 21 | 24 | $21 24\frac{1}{3}$ |
| | 33 0 | 21 | $23\frac{5}{6}$ | 21 24 |
| | 33 40 | 21 | $23\frac{3}{4}$ | 21 24 |
| | 34 30 | 21 | $23\frac{3}{4}$ | 21 24 |
| | 35 5 | 21 | $23\frac{5}{6}$ | 21 24 |
| | 35 55 | 21 | $23\frac{1}{6}$ | $21 23\frac{3}{4}$ |
| | 36 30 | 21 | $23\frac{3}{4}$ | 21 24 |

DIE 15 FEBRUARIJ, VESPERI.

| | | | | |
|----------------|-------------------|----|-----------------|--------------------|
| Arcturi 115 58 | 8 $21\frac{1}{2}$ | 21 | $28\frac{1}{4}$ | 21 28 |
| 115 7 | 8 54 | 21 | $27\frac{1}{3}$ | $21 27\frac{1}{4}$ |
| 114 11 | 9 $32\frac{1}{2}$ | 21 | 27 | $21 26\frac{3}{4}$ |

DIE 3 DECEMBRIS.

| | | | | |
|---------------|--------------------|----|-----------------|--|
| Arcturi 59 41 | 5 $48\frac{1}{3}$ | 21 | $30\frac{1}{3}$ | |
| 61 47 | 7 3 | 21 | $27\frac{1}{2}$ | |
| 67 17 | 10 $27\frac{1}{4}$ | 21 | $26\frac{1}{2}$ | |
| 69 3 | 11 $34\frac{2}{3}$ | 21 | 26 | |

DIE 16 DECEMBRIS.

Obferuatio Lyræ tendentis ad Merid. Sept.

| | | | |
|------------|--------------------|--------------------|--------------------|
| Lyræ 36 30 | 12 $39\frac{1}{2}$ | 38 $31\frac{2}{3}$ | 38 $31\frac{5}{6}$ |
| 35 30 | 12 0 | 38 $31\frac{2}{3}$ | 38 $31\frac{2}{3}$ |

N. B. Pro refractione ftellarum in minima altitudine cognoscenda funt imprimis obferuandæ ftellæ Perfej, vefperi in maxima altitudine meridiana, & mane in minima infra polum.

DIE 30 DECEMBRIS.

Ad ortum

| Azim. | Altit. | Declinatio | |
|------------------|--------|------------|--------|
| a Merid. ad ort. | | vno | altero |

Lyræ

| | | | |
|-------------------|-------------------|--------------------|--------------------|
| 61 47 | 28 $3\frac{1}{2}$ | 38 $28\frac{1}{4}$ | 38 $28\frac{3}{4}$ |
| 60 $2\frac{1}{3}$ | 26 53 | 38 $28\frac{3}{4}$ | 38 $28\frac{1}{2}$ |

Canis minoris per Q. Volub.

| | | |
|-------------------|-------------------|-------------------|
| 5 $52\frac{1}{2}$ | 6 20 | 6 $19\frac{5}{6}$ |
| 6 $35\frac{1}{2}$ | 6 20 | 6 $19\frac{3}{4}$ |
| 7 $26\frac{1}{6}$ | 6 $19\frac{1}{2}$ | |

3 40 8 11½ 8 1
2 30 8 4
1 35 8 9
1 15 8 10
1 fere 8 10
Decl. vera 7 52½ B.

Decl. vera 8 47½ 6 17½ 6 17½
6 13½ B. 9 47½ 6 17 6 16½
 10 59½ 6 17 6 16½
 11 42½ 6 17 6 16½
 14 30 6 16 6 15½
Cordis ♀ per Q. min.
3 10 14 7½
3 30 14 7
4 0 14 7½
6 0 14 3

COLLATIO REFRACTIONUM EARUM QUÆ CONTINGUNT
IN DECLINATIONIBUS¹.

| | Ad ortum | | | | | Ad occasum | |
|---|----------------------|----------------------|-------------|-----------------------|------------------|-----------------------|----------------------|
| | Arcturus | Cor ♀ | ♄ | Can. min. | Spica ♄ A° 86 | Lucidæ γ | Vultur |
| 0 | M " | M " | M " | M " | M " | M " | M " |
| 1 | 21 0 | | 18 0 | | 22 0 | | 17 50 |
| 2 | 16 30 | | 15 0 | | 15 30 | | 14 15 |
| 3 | 12 30 | 10 50 | 12 0 | | 11 40 | | 10 0 |
| 4 | 9 30 | | 9 0 | | 9 20 | | 8 0 |
| 5 | 7 40 | | 7 0 | | 7 40 | 5 30 | |
| 6 | 6 0 | 6 0 | 5 30 | 6 0 | 6 50 | 4 45 | 3 45 |
| 7 | | | 4 45 | 5 0 | 5 45 | 3 45 | |
| 8 | 5 15 | | 4 15 | 4 0 | 4 40 | 2 45 | 2 30 |
| 9 | | | 3 30 | 3 30 | 4 0 | 2 30 | |
| 10 | 4 10 | | 3 0 | | 3 20 | | |
| 11 | 3 40 | | | 2 50 | 3 0 | 2 15 | |
| 12 | 3 30 | | | | 2 50 | 1 30 | |
| 13 | 3 15 | | | | 2 40 | | |
| 14 | | | | | 2 35 | | 1 30 |
| 15 | 3 10 | | | | 2 30 | | |
| 16 | 2 50 | | | | | | |
| 17 | 2 10 | | | | | | |
| 18 | 1 30 | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | 0 55 | | | | | | |
| 22 | | | | | | | |
| Declinationes harum stellarum ex maxima altitudine meridiana ad Annum 89 | | | | | | | |
| | Arcturi 21 22½ B. | Cordis ♀ 13 57 B. | ♄ 7 0 B. | Can. min. 6 13½ B. | Spicæ ♄ ...² | Lucidæ γ 21 29½ B. | Vulturis 7 52½ B. |

¹ E cod. Vindob. 10688 18, fol. 1 v.
² 8° 57½' M., lineis induc̃ta.

OBSEUATIONES CIRCUMPOLARIUM PRO SITU ARMILLARUM ITEM PRO ELEUATIONE POLI.

DIE 3 JANUARIJ, VESPERI.

| | |
|--|---------------------|
| Alt. Merid. Mediæ caudæ Vrfæ mai. | |
| per Chalyb. | 23 2 |
| per Volub. | 23 1 |
| Lucid. in \square Vrfæ min. | |
| per Chalyb. | 41 44 $\frac{5}{6}$ |
| per Volub. | 41 45 $\frac{1}{6}$ |
| Capellæ Decl. per Armill. | 45 28 |
| alt. pin. | 45 28 $\frac{1}{2}$ |
| Reiterata & melior | 45 29 $\frac{1}{2}$ |
| | 45 29 $\frac{3}{4}$ |
| Reiterata | 45 29 $\frac{1}{2}$ |
| | 45 29 $\frac{1}{2}$ |
| Decl. Luc. in humero | 44 49 |
| Erichtonij alt. pin. | 44 49 $\frac{1}{4}$ |
| Ambæ hæ vltimæ stellæ erant tunc verfus ortum. | |
| Alt. mer. minus luc. in \square Vrfæ min. | |
| per Chalyb. | 39 12 $\frac{5}{6}$ |
| per Volub. | 39 12 $\frac{2}{3}$ |
| Decl. primæ caudæ vno | 58 14 $\frac{1}{4}$ |
| Vrfæ maioris alt. | 58 14 $\frac{3}{4}$ |
| Alterius in cauda | 57 7 $\frac{1}{2}$ |
| Vrfæ mai. | 57 7 $\frac{3}{4}$ |
| Vltimæ in cauda | 51 26 $\frac{1}{2}$ |
| Vrfæ mai. | 51 26 $\frac{1}{2}$ |
| Erant hæ omnes tres infra polum iuxta meridianum tunc temporis. | |

DIE 5 JANUARIJ, VESPERI.

| | |
|---------------------------------------|---------------------|
| Luc. in \square Vrfæ min. Alt. mer. | |
| per Chalyb. | 41 44 $\frac{3}{4}$ |
| per Volub. | 41 45 |
| per Sext. nou. | 41 44 $\frac{2}{3}$ |
| Alterius minus lucidæ | |
| per Chalyb. | 39 13 |
| per Volub. | 39 12 $\frac{5}{6}$ |
| per Sext. nou. | 39 12 $\frac{5}{6}$ |

DIE 7 JANUARIJ, MANE.

| | |
|--|---------------------|
| Stellæ polaris Alt. min. | |
| per Chalyb. | 52 59 35 |
| per Volub. | 53 0 |
| Flexuræ Caßiop. per Chalyb. | 24 25 $\frac{1}{6}$ |
| per Volub. | 24 24 $\frac{2}{3}$ |
| Lucidioris duarum in \square Vrfæ min. | |
| Decl. per Armillas vno | 75 51 |
| alt. pin. | 75 50 $\frac{3}{4}$ |

| | |
|-----------------------|---------------------|
| Alterius minus lucidæ | 73 19 |
| | 73 18 $\frac{3}{4}$ |

Cum eßent supra polum.

| | |
|---|--------------------|
| Lucidioris in \square Vrfæ min. alt. mer. | |
| per Chalyb. | 70 5 |
| per Volub. | 70 5 $\frac{1}{3}$ |

Vesperi

| | |
|---------------------------|---------------------|
| Lucidioris earundem Decl. | 75 51 |
| Alterius minus luc. vno | 73 19 $\frac{1}{4}$ |
| alt. | 73 19 |

| | |
|--|--------|
| Altitudo maxima lucidæ \square vrfæ maioris | 70 5 0 |
|--|--------|

| | |
|-------------------------------------|----------|
| Altitudo minima eiusdem hoc anno | 41 44 40 |
| diameter circuli | 28 20 20 |
| dist. a polo | 14 10 10 |
| Eleuatio poli | 55 54 50 |
| Aliter Maxima | 70 5 0 |
| Minima | 41 44 30 |

| | |
|-------------------|--------------------------|
| | 28 20 30 |
| | 14 10 15 |
| | 55 54 45 |
| Maxima | 58 49 40 aliter 58 49 45 |
| Alt. polaris min. | 52 59 40 52 59 40 |
| | 5 50 0 5 50 5 |
| | 2 55 0 2 55 3 |
| | 55 54 40 55 54 43 |

N. B. Insensibiliter itaque aberrabimus abumentes poli altitudinem huius loci p. 55 M. 54 S. 45.

| | |
|--|---------|
| Altitudo Spicæ \mathfrak{M} hoc anno | 25 7 55 |
| alt. æq. | 34 5 15 |
| decl. Spicæ | 8 57 20 |

Pro situ Armillarum

DIE 7 JANUARIJ, MANE.

| | |
|---|---------------------|
| Declinatio superioris duarum præcedentium in \square Vrfæ mai., cum eßet a polo verfus occasum | 63 58 |
| per Armillas | 63 57 $\frac{2}{3}$ |
| Inferioris duarum | 58 35 |
| præcedentium | 58 34 $\frac{1}{2}$ |

DIE 8 JANUARIJ.

| | |
|----------------------|---------------------|
| Eiusdem verfus ortum | 58 34 $\frac{1}{2}$ |
| | 58 34 $\frac{1}{4}$ |

DIE 9 JANUARIJ, VESPERI.

| | |
|-------------------------|---------------------|
| Superioris earundem | 63 58 |
| verfus ortum | 63 57 $\frac{5}{6}$ |
| Inferioris verfus ortum | 58 34 $\frac{1}{2}$ |
| | 58 34 $\frac{1}{2}$ |

*Patet itaque Armillas hoc anno satis exacte se habere, quoad situm axis correspondentem plano Meridiej, ita vt declinationes per eas ver-
sus ortum & occasum extra Meridiej situm acceptæ nullam lufferant deu-
iationis hæsitationem.*

DIE 12 FEBRUARIJ, MANE.

| | |
|----------------------------|---------------------|
| Stellæ Polaris alt. minima | |
| per Chalyb. | 52 59 $\frac{3}{4}$ |
| per Volub. | 52 59 $\frac{3}{4}$ |

DIE 15 MARTIJ, VESPERI.

| | |
|------------------------------------|---------------------|
| Stellæ Polaris alt. merid. minima. | |
| per Volub. | 53 0 |
| per Chalyb. | 52 59 25 |
| per Q. min. az. | 52 59 $\frac{1}{3}$ |

DIE 28 MARTIJ.

| Alt. merid. per Chalyb. | Sext. | Q. min. azim. |
|-------------------------|---------------------|---|
| Lucidæ | | |
| cathedræ | 22 49 | 22 49 $\frac{1}{6}$ 22 47 $\frac{2}{3}$ |
| Schedir | 20 12 $\frac{1}{6}$ | 20 11 $\frac{3}{4}$ 20 12 $\frac{1}{3}$ |
| Stellæ Pol. min. | 52 58 $\frac{5}{6}$ | 52 59 52 59 $\frac{1}{3}$ |
| Flexuræ Caß. | 24 23 55 | 24 24 24 24 $\frac{2}{3}$ |

DIE 13 DECEMBRIS, VESPERI.

| Alt. Merid. per Chalyb. | Volub. |
|-------------------------|---------------------------------------|
| Stellæ Polaris max. | 58 48 55 58 49 |
| Primæ in cauda Vrsæ | |
| mai. minima | 24 8 $\frac{1}{3}$ 24 8 $\frac{1}{6}$ |
| Mediæ in cauda | 23 2 $\frac{1}{6}$ 23 2 |
| Extremæ in cauda | 17 20 $\frac{1}{2}$ 17 21 |

DIE 15 DECEMBRIS, VESPERI.

| | |
|---|---------------------|
| Altitudo minima superioris sequen- tium in \square Vrsæ mai. | |
| per Chalyb. | 25 15 |
| per Volub. | 25 15 $\frac{1}{3}$ |
| Stellæ Polaris max. per Chal. | 58 49 $\frac{1}{6}$ |
| per Volub. | 58 49 |
| Primæ in cauda Vrsæ maioris inter rariufculas nubes | |
| per Chalyb. | 24 8 $\frac{5}{6}$ |
| per Volub. | 24 8 $\frac{1}{3}$ |
| Mediæ per Chalyb. | 23 2 $\frac{1}{2}$ |
| per Volub. | 23 1 $\frac{5}{6}$ |

DIE 16 DECEMBRIS, VESPERI.

| | |
|-------------------------------------|---------------------|
| Infer. sequ. in \square Vrsæ mai. | |
| per Chalyb. | 21 54 $\frac{2}{3}$ |
| per Volub. | 21 54 $\frac{2}{3}$ |
| Superioris sequentium | |
| per Chalyb. | 25 14 $\frac{5}{6}$ |
| per Volub. | 25 14 $\frac{5}{6}$ |
| Stellæ Polaris alt. max. | |
| per Chalyb. | 58 49 $\frac{1}{2}$ |
| per Volub. | 58 49 $\frac{1}{6}$ |
| Mediæ in cauda Vrsæ mai. | |
| per Chalyb. | 23 2 $\frac{1}{6}$ |
| per Volub. | 23 1 $\frac{5}{6}$ |
| Extremæ in cauda per Chal. | 17 21 $\frac{2}{3}$ |
| | dubia |
| per Volub. | 17 21 $\frac{1}{2}$ |
| Lucidæ in \square Vrsæ min. | |
| per Chalyb. | 41 44 $\frac{1}{3}$ |
| per Volub. | 41 43 $\frac{3}{4}$ |
| Minus lucidæ per Chalyb. | 39 12 $\frac{1}{2}$ |
| per Volub. | 39 12 $\frac{1}{2}$ |

DIE 30 DECEMBRIS, VESPERI.

| | |
|---|---------------------|
| Stellæ Polaris max. per Chal. | 58 49 |
| per Volub. | 58 48 $\frac{5}{6}$ |
| Anterior & lucidior in rota Vrsæ minoris per Chal. | 41 44 $\frac{1}{3}$ |
| per Volub. | 41 43 $\frac{5}{6}$ |
| potius | 44 $\frac{1}{2}$ |
| Sequ. minus lucida per Chal. | 39 12 $\frac{1}{4}$ |
| per Volub. | 39 12 $\frac{1}{2}$ |
| Tertia in cauda Draconis per Chalyb. | 32 17 $\frac{1}{2}$ |
| Pro situ Armillarum | |
| Capellæ Declin. vno pin. | 45 30 |
| altero | 45 29 $\frac{3}{4}$ |
| Caudæ Cygni | 43 52 |
| | 43 51 $\frac{3}{4}$ |

Erat tunc Capella a Meridie ad ortum in æquali fere remotione a polo cum Cauda Cygni.

| | |
|-------------------------|----------|
| Altitudo maxima polaris | 58 49 10 |
| Altitudo minima polaris | 53 0 0 |
| | 5 49 10 |
| | 2 30 |
| | 24 35 |
| | 2 54 35 |
| | 53 0 0 |
| | 55 54 35 |

APPENDIX AD OBSERVATIONES ANNI 1589¹.

CATALOGUS

continens

Omnium stellarum duodecatemorum (quæ obseruari poterant) Ascensiones rectas et Declinationes indeque earum Longitudines et Latitudines quæ Anno 1589 hic Vraniburgi in obseruatorio subterraneo cælitus fideliter dimensæ sunt.

Sequuntur Ascensiones rectæ quarundam stellarum quibus in indagandis cæterarum Ascensionibus rectis tanquam fundamentis vsi sumus.

| | | | |
|-------------------------|------------|------------------------------------|--------------|
| Lucida ♀ ad init. A. 89 | 26° 3' 0'' | Borealis ianx Libræ | 223° 45' 0'' |
| Oculus ♀ | 63 6 20 | Australis in cornu ♀ | 299 28 30 |
| Canis minor | 109 27 7 | Marcab seu 1 ^a alæ Peg. | 341 6 15 |
| Inferius caput II | 110 0 30 | Lucida Vulturis | 292 41 25 |
| Cor Ω | 146 35 50 | Extrema alæ Pegasi | 358 4 20 |
| Lucida ceruicis Ω | 149 15 50 | Ascens. R. Oris Pegasi | 321 1 0 |
| Vindemiator III | 190 24 27 | Caput Andromedæ | 356 51 0 |
| Spica III | 195 55 0 | Ascensio R. Capellæ | 71 35 0 |
| Caput Andromedæ | 356 50 30 | | |

ASTERISMUS ♀.

In ♀ sunt stellæ omnes numero septemdecim, quarum

| | | | |
|---------|---------|------|----------------|
| magni- | tertiae | funt | 1 est 3 nostra |
| tudinis | quartae | | |
| | quintae | | |
| | sextae | | |

Lucida stella in vertice ♀ mag. 3^æ mai., quæ nobis est tertia, cuius ad initium huius anni præsupponitur

| | |
|------------------|-------------|
| Ascensio Recta | 26° 3' 0'' |
| Declinatio borea | 21 29 30 |
| Resp. Longitudo | 1° 55½' ♀ |
| Latitudo | 9 57½ borea |

Prima, mag. 4^{ta} Australis in præcedente cornu. Asc. recta

| | |
|-----------------|------------|
| Declin. borea | 22° 46½' |
| Declin. borea | 17 15 |
| Resp. Longitudo | 27° 26¾' ♀ |
| Latitudo | 7 9 borea |

Secunda, mag. 4^{ta}, borealis in eodem cornu. Asc. R.

| | |
|---------------|------------|
| Declin. borea | 23° 0' 0'' |
| Declin. borea | 18 46½ |

| | |
|-----------------|-----------|
| Resp. Longitudo | 28° 13' ♀ |
| Latitudo | 8 29 bor. |

N. B.² Ascensiones rectæ et Declinationes harum trium præcedentium ex Ascensionibus R. Aⁱ 87 incipientis sunt recollectæ adiectis Ascensioni R. 50'' pro quolibet anno etc.

Tertia, veterum 6^{ta} mag., præcedens duarum in fronte ♀, distat ab

| | |
|-----------------------|----------|
| Aldebora | 34° 7' |
| Declinatio eius Bor. | 19 16 |
| Asc. R. ab Aldeb. | 27 29 29 |
| Viceversa | 27 33 5 |
| Hinc Asc. R. emendata | 27 30 30 |
| Declinatio B. | 19 15 30 |

| | |
|-----------------|-----------|
| Resp. Longitudo | 2° 24' ♀ |
| Latitudo | 7 23 Bor. |

Quarta, 6^{ta} mag., duarum sequens in rictu, distat ab Aldebora 32° 49¾'

| | |
|-------------------|----------|
| Asc. R. ab Aldeb. | 28 51 33 |
| | 28 54 30 |
| Ascensio Recta | 28 53 0 |

¹ Cod. Vindob. lat. 10709 a nobis Codex V¹ vocatus; cf. T. III p. 409.

² In margine adscriptum.

Declinatio Bor. 17 57 30
 Resp. Longitudo 3° 10' ♀
 Latitudo 5 42½ B.

Quinta, 5^{ta} mag., quæ est in collo,
 ab Aldebora 37° 49½'
 Asc. R. ab Aldeb. 23 45 37
 Viceversa 23 46 49
 Ascensio recta 23 46½
 Declinatio borea 15 45 40
 Resp. Longitudo 27° 47' V
 Latitudo 5 24 borea

Sexta, 6^{ta} mag., quæ est in dorso,
 distat ab Aldebora 28° 7'
 Asc. R. ab Aldeb. 33 58 10''
 33 55 34
 Ascensio recta 33 56 50
 Declinatio borea 20 8 30
 Resp. Longitudo 8° 26' ♀
 Latitudo 6 7 B.

Septima, magnitudinis 5^{ta}, quæ in
 eductione caudæ est, distat ab Alde-
 bora 23° 19' 40''
 Asc. R. ab Aldeb. 38 58 36
 Viceversa 38 58 56
 Ascensio recta 38 58 40
 Declinatio borea 19 39 30
 Resp. Longitudo 12° 46½' ♀
 Latitudo 4 8½ Bor.

Octava, 4^{ta} mag. Præcedens seu au-
 stralior in cauda, ab Aldebora 20° 17' 30''
 Asc. R. ab Aldeb. 42 3 11
 Viceversa 42 3 27
 Ascensio recta 42 3 20
 Declinatio borea 18 6 15
 Resp. Longitudo 15° 5' ♀
 Latitudo 1 46½ B.

Nona 5^{ta} mag. Media caudæ ab Al-
 debora 19° 39½'
 Asc. R. ab Aldeb. 42 52 11
 Viceversa 42 53 44
 Ascensio recta 42 53 0
 Declinatio borea 19 27 30
 Resp. Longitudo 16° 14' ♀
 Latitudo 2 50 B.

Decima mag. 6^{ta}. Ultima caudæ ab
 Aldebora 18° 5½'
 Asc. R. 44 24 50
 Viceversa a cap. Androm. 44 25 50
 Ascensio R. emendata 44 25½
 Declinatio Borea 19 39
 Resp. Longitudo 17° 40½' ♀
 Latitudo 2 36 B.

Vndecima 6^{ta} mag. Stellula quæ in
 femore, distat ab Aldebora 23° 48'
 Asc. R. ab Aldeb. 38 20 49
 Viceversa 38 22 28
 Ascensio Recta 38 21 30
 Declinatio Borea 16 22 30
 Resp. Longitudo 11° 11½' ♀
 Latitudo 1 12 B.

Duodecima 6^{ta} mag. Præcedens 11^{am}
 seu australis superiorum in □^{to}, distat
 ab Aldebora 25° 28½'
 Asc. R. ab Aldeb. 36 38 23
 Viceversa 36 37 15
 Ascensio Recta 36 37 50
 Declinatio Borea 15 43 30
 Resp. Longitudo 9° 24½' ♀
 Latitudo 1 6½ B.

Decima tertia mag. 6^{ta} in genu fini-
 stro et sequens inferiorum in □^{to}, di-
 stat ab Aldebora 25° 9½'
 Asc. R. ab Aldeb. 37 13 2
 Viceversa 37 15 52
 Ascensio Recta 37 14 30
 Declinatio Borea 13 21 10
 Resp. Longitudo 9° 12½' ♀
 Latitudo 1 29½ Austr.¹

Decima quarta 6^{ta} mag. Præcedens
 duarum inferiorum in □^{to}, distat ab
 Aldebora 26° 45½'
 Asc. R. ab Aldeb. 35 31 25
 Viceversa 35 32 32
 Ascensio Recta 35 32
 Declinatio borea 13 30½
 Resp. Longitudo 7° 41½' ♀
 Latitudo 0 39 Austr.

Decima quinta mag. 6^{ta}, quæ est in
 alvo, distat a capite Andromedæ 36° 1½'

¹ Debet esse 1° 19¾'. Cf. T. III p. 412.

| | |
|------------------------|-----------|
| Afc. R. a cap. Andr. | 34 51 40 |
| ab oculo ☿ | 34 49 0 |
| Afcensio R. verificata | 34 50 |
| Declinatio borea | 18 13 |
| Resp. Longitudo | 8° 36½ ☿ |
| Latitudo | 4 1 borea |

| | |
|--------------------------------------|-------------|
| Decima sexta mag. 6 ^{tae} . | |
| Afc. R. ab Aldebora | 25° 56' 34" |
| Viceversa a cap. Andr. | 25 54 25 |
| Afcensio R. emendata | 25 55½ |
| Declinatio borea | 20 39 |
| Resp. Longitudo | 1° 30½ ☿ |
| Latitudo | 9 13 B. |

ASTERISMUS ☿.

Taurus habet stellas 43.

| | | | |
|----------------------------|---------|------|----|
| Harum magni- tudinis | primæ | funt | 1 |
| | secundæ | | 1 |
| | tertiæ | | 5 |
| | quartæ | | 7 |
| | quintæ | | 18 |
| | sextæ | | 11 |

Prima et suprema in interfectione magnitudinis 5^{tae},

| | |
|----------------------|-----------|
| distat ab Aldebora | 16° 8½' |
| Afc. R. ab Aldeb. | 47 2 46" |
| Viceversa a lucida √ | 47 4 14 |
| Vera Afcensio Recta | 47 3½ |
| Declinatio borea | 11 29 |
| Resp. Longitudo | 17° 50' ☿ |
| Latitudo | 5 57 Auf. |

Secunda proxime infra in interfectione 6^{tae} magnitudinis,

| | |
|---------------------------------------|-----------|
| distat ab Aldebora | 16° 43' |
| Afcens. R. ab Aldeb. | 47 0 5" |
| Viceversa a luc. √ non est obseruata. | |
| Afcens. R. | 47 0 0 |
| Declinatio borea | 9 52 30 |
| Resp. Longitudo | 17° 20' ☿ |
| Latitudo | 7 29 Auf. |

Tertia in interfectione magn. 4^{tae}

| | |
|--------------------------------|------------|
| maior., dist. ab Aldeb. | 18° 4½' |
| Afc. R. ab Aldeb. | 46 12 56" |
| Viceversa a lucida √ | 46 13 11 |
| Media Afcensio R ^{ta} | 46 13 |
| Declinatio borea | 8 15½ |
| Resp. Longitudo | 16 7½ |
| Latitudo | 8 49½ Auf. |

| | |
|--|------------|
| Quarta et infima in interfectione magn. 4 ^{tae} , distat ab oculo ☿ | 18° 51¾' |
| Afc. R. iuxta Aldeb. | 45 41 34" |
| Viceversa secund. luc. √ | 45 41 5 |
| Media Afcensio Recta | 45 41½ |
| Declinatio borea | 7 32 |
| Resp. Longitudo | 15° 25¼ ☿ |
| Latitudo | 9 22½ Auf. |

Quinta mag. 5^{tae}, quæ in armis est,

| | |
|------------------------|-----------|
| dist. a lucido II pede | 41° 23¾' |
| Afc. R. a luc. pede II | 51 26 23" |
| Viceversa a luc. √ | 51 28 |
| Afcensio R. emendata | 51 27½ |
| Declinatio borea | 9 49½ |
| Resp. Longitudo | 21° 35½ ☿ |
| Latitudo | 8 41 Auf. |

Sexta 4^{tae} mag. Pectus ☿. Distat a

| | |
|-----------------------------|-----------|
| lucida stella in pedibus II | 38° 8½' |
| Afcens. R. a lucido pede | 54 30 5¹ |
| Viceversa a lucida √ | 54 26 55 |
| Afcensio R. media | 54 28 30 |
| Declinatio borea | 11 13 40 |
| Resp. Longitudo | 24° 51' ☿ |
| Latitudo | 8 3 Auf. |

Septima mag. 4^{tae}. Genu pedis præ-

| | |
|--------------------------|-------------|
| cedentis, a luc. II pede | 35° 26¾' |
| Afc. R. a lucido pede | 58 17 7 |
| Viceversa | 58 19 43 |
| Afcensio recta media | 58 18 20 |
| Declinatio borea | 7 48 40 |
| Resp. Longitudo | 27° 49' ☿ |
| Latitudo | 12 13½ Auf. |

¹ Adscriptum est: »Videtur melior, ideoque longitudo cum limitata Afcensione Recta corrigenda venit.« In catalogo tamen hæc longitudo sine ulla correctione inserta est.

Octava 4^{ta} mag. Præcedens in anteriore pede.

| | |
|------------------------------|---------------|
| Afc. R. a luc. pede | 55° 19' 50" |
| Viceversa a lucida V | 55 19 37 |
| Vera Ascensio recta | 55 19 40 |
| Declinatio borea | 4 47 0 |
| Resp. Longitudo 24° 8' 40" ♀ | |
| Latitudo | 14 30 30 Auf. |

Nona mag. 5, borealis seu genu pedis sequentis.

| | |
|------------------------|------------|
| Afc. R. a luc. pede II | 63° 46' 2" |
| Viceversa | 63 49 18 |
| Mediata Ascensio R. | 63 47 40 |
| Declinatio borea | 11 38 20 |
| Resp. Longitudo | 3° 59' II |
| Latitudo | 9 32 Auf. |

Decima 5^{ta} mag. inferior pedis sequentis.

| | |
|-------------------------------|--------------|
| Afc. R. a lucido pede | 63° 15' 5" |
| Viceversa a lucida V | 63 16 12 |
| Vera Ascensio R ^{ta} | 63 15 40 |
| Declinatio borea | 9 14 20 |
| Resp. Longitudo | 3° 0' 45" II |
| Latitudo | 11 48 0 Auf. |

Vndecima 3^{ta} mag., succularum prima in naribus ♀.

| | |
|------------------------|--------------|
| Afc. R. a luc. pede II | 59° 5' 8" |
| Viceversa a lucida V | 59 7 33 |
| Ascensio R. limitata | 59 6 20 |
| Declinatio borea | 14 34 30 |
| Resp. Longitudo | 0° 1' 46" II |
| Latitudo | 5 46 30 Auf. |

Duodecima 3^{ta} mag. succularum sequens et secunda.

| | |
|--------------------------|-------------|
| Afc. R. a lucido pede II | 59° 48' 24" |
| Viceversa a lucida V | 59 50 21 |
| Media Ascensio recta | 59 49 20 |
| Declinatio borea | 16 30 0 |
| Resp. Longitudo | 1° 6½' II |
| Latitudo | 4 2 Auf. |

Decima tertia 4^{ta} mag. Quæ est inter Aldeboram et nares.

| | |
|---------------------|------------|
| Afc. R. a luc. pede | 61° 17' 5" |
|---------------------|------------|

| | |
|----------------------|-----------|
| Viceversa a luc. V | 61 20 24 |
| Ascensio Recta media | 61 18½ |
| Declinatio borea | 14 54 |
| Resp. Longitudo | 2° 12' II |
| Latitudo | 5 53 Auf. |

Decima quarta mag. 1^{ma}. Aldeboram, Lucidus et australis oculus ♀, cuius hic ad initium anni præsupponitur.

| | |
|------------------|------------|
| Ascensio recta | 63° 6' 30" |
| Declinatio borea | 15 37 0 |
| Resp. Longitudo | 4° 2¼' II |
| Latitudo | 5 30½ Auf. |

Decima quinta, mag. 3^a Borealis oculus ♀.

| | |
|-----------------------|-----------|
| Afc. R. a lucido pede | 61° 9' |
| Viceversa a lucida V | 61 13 |
| Media Ascensio recta | 61 11 |
| Declinatio borea | 18 12½ |
| Resp. Longitudo | 2° 43' II |
| Latitudo | 2 37 Auf. |

Decima sexta 6^a mag. Ea quæ est in radice australis cornu ♀.

| | |
|---------------------------|----------|
| Dist. ab infer. cap. II | 40° 47½' |
| Afc. R. ab infer. cap. II | 66 50½ |
| Viceversa | 66 54 30 |
| Ascensio recta media | 66 52 35 |
| Declinatio borea | 18 6¹ |

Decima septima 6 mag. Australis duarum in australi cornu.

| | |
|---------------------------|------------|
| Afc. R. ab infer. cap. II | 70° 51½' |
| Viceversa a lucida V | 70 56½ |
| Ascensio R. emendata | 70 54 |
| Declinatio borea | 19 49½ |
| Resp. Longitudo | 12° 3¼' II |
| Latitudo | 3 30½ M. |

Decima octava mag. 5^{ta}, duarum in cornu australi borea.

| | |
|--------------------|-----------------------|
| Afc. R. a lucida V | 69° 39' 13" |
| Viceversa | 69 37 24 |
| Declinatio B. | 20 56½ |
| Resp. Longitudo | 10° 53' 52" II |
| Latitudo | 1 49½ M. ² |

¹ Longitudo et Latitudo defunt.

² Long. debet esse 11° 5½', Lat. 1° 15½' (cf. T. III p. 412).

Decima nona magn. 3^{iae}. Vltima cornu australis.

| | |
|------------------------|--------------------------|
| Afc. R. ab infer. cap. | 78° 15' 46'' |
| Viceversa | 78 15 10 |
| Vera Ascensio recta | 78 15 30 |
| Declinatio borea | 20 50 10 |
| Resp. Longitudo | 19° 1 $\frac{1}{2}$ ' II |
| Latitudo | 2 14 Aust. |

Vicesima 5^{tae} magn. Quæ est in radice cornu borealis.

| | |
|---------------------------|-------------|
| Afc. R. ab infer. cap. II | 64° 24' 0'' |
| Viceversa a lucida V | 64 25 49 |
| Ascensio R. media | 64 25 |
| Declinatio borea | 22 6 |
| Resp. Longitudo | 6° 25' II |
| Latitudo | 0 40 Borea |

Vicesima prima mag. 2^{dæ}. Boreale cornu γ seu lucidus pes Erichtonij.

| | |
|-----------------------|-------------------------|
| Afc. R. a lucida V | 75° 4 $\frac{3}{4}$ ' |
| Viceversa | 75 6 $\frac{1}{2}$ |
| Ascensio recta emend. | 75 5 35 |
| Declinatio borea | 28 10 $\frac{1}{2}$ |
| Resp. Longitudo | 16° 49' 20'' II |
| Latitudo | 5 20 borea ¹ |

Vicesima secunda mag. 5^{tae} in aure borealis.

| | |
|------------------------|---------------------|
| Afc. recta a luc. pede | 60° 25' 55'' |
| Viceversa | 60 26 51 |
| Ascensio r. verificata | 60 26 $\frac{1}{2}$ |
| Declinatio borea | 21 49 |
| Resp. Longitudo | 2° 44' II |
| Latitudo | 1 4 Borea |

Vicesima tertia, mag. 4^{tae} in aure australis.

| | |
|------------------------|---------------------|
| Afc. recta a luc. pede | 60° 14' |
| Viceversa | 60 15 |
| Ascensio r. emendata | 60 14 $\frac{1}{2}$ |
| Declinatio borea | 21 17 $\frac{1}{2}$ |
| Resp. Longitudo | 2° 28' II |
| Latitudo | 0 35 borea |

Vicesima quarta mag. 5^{tae}, quæ præcedens duarum in collo.

| | |
|---------------------------|-------------|
| Afc. recta a luc. ped. II | 55° 6' 49'' |
| Viceversa a luc. V | 55 7 54 |
| Ascensio R. verificata | 55 6 30 |

Declinatio borea 20 52 40

Resp. Longitudo 27° 41' γ
Latitudo 1 12 Borea

Vicesima quinta mag. 6^{tae}. Est sequens in collo γ .

| | |
|------------------------|---------------------|
| Afc. recta a luc. pede | 58° 16' 6'' |
| Viceversa a luc. V | 58 19 44 |
| Ascensio r. verificata | 58 18 |
| Declinatio borea | 19 31 $\frac{1}{2}$ |
| Resp. Longitudo | 0° 18' 23'' II |
| Latitudo | 0 46 18 M. |

Vicesima sexta mag. 6^{tae}. Paruula infra australem præcedentium duarum in quadrilatero γ .

| | |
|------------------------------|---------------------------------|
| Afc. recta ab infer. cap. II | 56° 26' |
| Viceversa a luc. V | 56 28 $\frac{5}{6}$ |
| Ascensio recta emend. | 56 27 $\frac{1}{3}$ |
| Declinatio borea | 25 20 |
| Resp. Longitudo | 29° 53 $\frac{2}{3}$ ' γ |
| Latitudo | 5 16 $\frac{1}{2}$ B. |

Vicesima septima mag. 5^{tae}. Borealis præcedentium in quadrilatero colli γ .

| | |
|------------------------------|---------------------------------|
| Afc. recta ab infer. cap. II | 55° 26 $\frac{1}{2}$ ' |
| Viceversa | 55 27 $\frac{1}{6}$ |
| emendata | 55 26 $\frac{3}{4}$ |
| Declinatio borea | 27 50 $\frac{1}{2}$ |
| Resp. Longitudo | 29° 35 $\frac{1}{2}$ ' γ |
| Latitudo | 7 55 borea |

Vicesima octava, magn. 5^{tae}, sequentium inferior in \square^{to} γ .

| | |
|------------------------------|--------------------------|
| Afc. recta ab infer. cap. II | 59° 26 $\frac{2}{3}$ ' |
| Viceversa | 59 27 $\frac{2}{3}$ |
| Ascensio recta media | 59 27 $\frac{1}{4}$ |
| Declinatio borea | 24 34 $\frac{1}{4}$ |
| Resp. Longitudo | 2° 23 $\frac{5}{6}$ ' II |
| Latitudo | 3 56 $\frac{3}{4}$ B. |

Vicesima nona mag. 6^{tae}. Borealis sequentium in quadrilatero.

| | |
|--|--------------------------|
| Afc. recta a lucida V | 58° 48 $\frac{1}{2}$ ' |
| Hæc afc. recta retinenda est, quia ab hac stella bis diuersis annis obseruata est, iterata etiam declin. | |
| Declinatio borea | 26 18 $\frac{1}{2}$ bona |
| Resp. Longitudo | 2° 15 $\frac{1}{4}$ ' II |
| Latitudo | 5 45 $\frac{1}{2}$ B. |

¹ Adscriptum est in margine: »Distantia huius 21^{ae} ab Aldeb. 16° 44' 50''. Item a superiori capite II 33° 3' 45''. Hinc locus eius exactius haberi potest».

Tricesima, magn. 5^{ta}, quæ est occi-
dentalis lucidiorum trium in plejadi-
bus.

Afc. R. a lucido pede II 50° 7' 54''
Viceversa a luc. V 50 9 5
Adhuc a bor. cornu ♀ 50 7 45
Afc. R. verificata 50 8 30
Declinatio borea 22 47 40
Resp. Longitudo 23° 40' ♀
Latitudo 4 10²/₃ B.

Tricesima prima mag. 6^{ta} minor.
Proxima occidentali et infima.

Afc. R. a lucida V 50° 23¹/₂'
non habetur viceversa.
Declinatio borea 22 42¹/₂ retinetur.
Resp. Longitudo 23° 52¹/₂' ♀
Latitudo 4 1 50 B.

Tricesima secunda mag. 3^a Plejadum
media et lucida.

Afc. R. a luc. pede II 50° 46' 56''
Viceversa a luc. V 50 45 56
Afc. recta verificata 50 46
Declinatio borea 22 46
Resp. Longitudo 24° 14' ♀
Latitudo 4 0 borea

Tricesima tertia 5^{ta} mag. Quæ est in
cuspidè ad ortum.

Afc. recta a luc. pede II 51° 11' 53''
Viceversa a luc. V 51 11 57
Ascensio R. verificata 51 12
Declinatio borea 22 46
Resp. Longitudo 24° 37' ♀
Latitudo 3 55 Bor.

Tricesima quarta mag. 6^{ta}. Est om-
nium australissima et in vngula pedis
præcedentis seu sinistri.

Afc. recta a luc. pede II 50° 57'
Declinatio borea 4 43
Resp. Longitudo 19° 47' ♀
Latitudo 13 30 Austr.

Tricesima quinta mag. 6^{ta}. Stellula
in talo sequentis pedis.

Afc. recta a luc. pede II 60° 20¹/₃'
Viceversa a luc. V 60 26

Afc. recta emendata 60 22¹/₆
Declinatio borea 8 26¹/₃
Resp. Longitudo 29° 59²/₃' ♀
Latitudo 12 2¹/₄ Aust.

Tricesima sexta mag. 5^{ta}. Stellula in
fæmore sequentis pedis.

Viceversa non habetur.
Afc. R. ab infer. cap. II 61° 28¹/₄'
Declinatio borea 12 4¹/₂
Resp. Longitudo 1° 48¹/₄' II
Latitudo 8 41 Aust.

Tricesima septima mag. 5^{ta}. Australior
et occidentalior trium infra succulis.

Afc. R. ab infer. cap. II 60° 51¹/₂'
limitata. Viceversa obseruata bene
respondet.
Declinatio borea 13 44
Resp. Longitudo 1° 32' II
Latitudo 6 56¹/₂ Aust.

Tricesima octava mag. 5^{ta}. Earun-
dem trium media.

Afc. R. ab infer. cap. II 62° 38' 10''
Viceversa 62 39 10
Ascensio recta emendata 62 38²/₃
Declinatio borea 13 56
Resp. Longitudo 3° 17²/₃' II
Latitudo 7 4¹/₂ M.

Tricesima nona mag. 5^{ta}. Trium su-
prema et vltima proxime infra ocu-
lum ♀ Aust.

Afc. recta ab infer. cap. II 63° 58¹/₄'
Viceversa 63 57 33''
Ascensio recta emend. 63 58
Declinatio borea 14 57²/₃
Resp. Longitudo 4° 45¹/₂' II
Latitudo 6 17²/₃ M.

Quadragesima mag. 6^{ta}. Quæ est in
aust. cornu numero quarta.

Distat ab infer. cap. II 33° 31²/₃'
Afc. recta ab infer. cap. 73 40
Viceversa 73 43¹/₄
Ascensio recta emend. 73 41²/₃
Declinatio borea 21 35¹/₂
Resp. Longitudo 14° 52¹/₄' II
Latitudo 1 4¹/₆ M.

¹ Adscriptum est »Emendata ascensio recta viceversa«.

Quadragesima prima mag. 6^{te}. Quinta in cornu et extremæ proxima.

Afc. recta ab inf. cap. II 75° 44'

Viceversa 75 45 $\frac{1}{2}$

Afcensio recta emend. 75 44 $\frac{1}{2}$

Declinatio borea 21 31 $\frac{1}{2}$

Resp. Longitudo 16° 45 $\frac{1}{2}$ ' II

Latitudo 1 20 $\frac{1}{2}$ M.

Quadragesima secunda mag. 6^{te}. Stellula conficiens triangulum rectangulum cum 3^{ta} et 4^{ta} ♀ in interfectione.

Afc. R. a lucido pede II 47° 36'

Viceversa a 22 X 47 37 50

Afc. recta limitata 47 37 0

Declinatio borea 7 54

Resp. Longitudo 17° 22 $\frac{3}{4}$ ' ♀

Latitudo 9 34 $\frac{1}{2}$ Auf.

Quadragesima tertia mag. 5^{te}. Australis præcedentium in quadrilatero colli Tauri.

Afc. R. ab infer. cap. II 55° 22'

Viceversa 55 25

Afcensio R. emend. 55 23 $\frac{1}{2}$

Declinatio borea 26 25 $\frac{1}{2}$

Resp. Longitudo 29° 12 $\frac{1}{4}$ ' ♀

Latitudo 6 32 $\frac{3}{4}$ B.

ASTERISMUS II.

Stellæ II^{orum} numero sunt 25,

| | | | |
|--------------------|---------|------|---|
| harum magnitudinis | primæ | funt | 2 |
| | secundæ | | 1 |
| | tertiæ | | 4 |
| | quartæ | | 8 |
| | quintæ | | 4 |
| | sextæ | | 6 |

Prima, mag. 2^æ. Caput inferius II.

Afc. R. a corde Ω 109° 59' 12"

Ex obseruat. anni 87 110 0 2

Afc. recta emendata 110 0 0

Declinatio borea 28 56 20

Resp. Longitudo 17° 32' 30" ☾

Latitudo 6 38 20 borea

Secunda mag. 2^æ. Superius caput II.

Afc. R. a lucida ceruicis 107° 0' 52"

Ex obseruat. Aⁱ 87 107 2 53

Afcens. recta emendata 107 2 0

Declinatio borea 32 41 30

Resp. Longitudo 14° 30 $\frac{2}{3}$ ' ☾

Latitudo 10 2 borea.

Tertia mag. 5^{te}. Quæ est in suprema et boreali manu.

Afc. R. a luc. ceruicis Ω 96° 22' 25"

Viceversa ab Aldeboram 96 23 44

Afcensio R. verificata 96 23

Declinatio borea 34 22 $\frac{1}{2}$

Resp. Longitudo 5° 21 $\frac{5}{6}$ ' ☾

Latitudo 10 58 $\frac{1}{6}$ B.

Quarta mag. 4^{te}. In sinistro brachio seu scapula superiori.

Afc. R. a luc. ceruicis Ω 101° 15' 15"

Viceversa 101 14 43

Inuenta est postea Afc. R. 101 15

Declinatio borea 30 51

Resp. Longitudo 9° 44' ☾

Latitudo 7 43 borea

Quinta mag. 4^{te}. Quæ in dextra seu inferiori scapula superioris II^{orum}.

Afc. recta a corde Ω 105° 1' 5"

Viceversa 105 1 23

Vera Afcensio recta 105 1 $\frac{1}{4}$

Declinatio borea 28 32 $\frac{2}{3}$

Resp. Longitudo 13° 13 $\frac{1}{2}$ ' ☾

Latitudo 5 42 $\frac{1}{2}$ borea

Sexta mag. 5^{te}.

Quæ est in collo inferioris II^{orum}.

Afc. R. a corde Ω 107° 34' 30"

Viceversa 107 35 0

Afcensio R. verificata 107 35

Declinatio borea 27 44

Resp. Longitudo 15° 36 $\frac{2}{3}$ ' ☾

Latitudo 5 10 borea

Septima mag. 4^{te}

In cubito australi inferioris II.

Afc. R. a corde Ω 109° 52' 33"

Viceversa 109 52 52

Vera ascensio recta 109 52 40
 Declinatio borea 25 19 30
 Resp. Longitudo $17^{\circ} 56' \odot$
 Latitudo 3 3 borea

Octava mag. 6^{tae}.
 Stellula inter 5^m & 12^m.
 Asc. R. a corde \odot 104° 35' 14"
 Viceversa 104 35 2
 Vera Ascensio recta 104 35
 Declinatio borea 25 47 $\frac{1}{3}$
 Resp. Longitudo $13^{\circ} 8' \odot$
 Latitudo 2 56 borea.

Nona mag. 6^{tae}. Stellula in sinistro cubito superioris gemini.
 Asc. R. a corde \odot 105° 52'
 Asc. R. ab Aldeb. 105 57 30
 Asc. R. emendata 105 54 45
 Declinatio borea 28 45
 Resp. Longitudo $13^{\circ} 59\frac{3}{4}' \odot$
 Latitudo 6 0 $\frac{1}{2}$ B.

Decima, mag. 3^{iae}.
 Boreale et supremum genu.
 Asc. R. a corde \odot 94° 38' 52"
 Viceversa 94 38 51
 Asc. recta verificata 94 38 50
 Declinatio borea 25 37 45
 Resp. Longitudo $4^{\circ} 11\frac{5}{8}' \odot$
 Latitudo 2 11 borea¹.

Vndecima mag. 3^{iae}.
 In sinistro genu sequentis.
 Asc. R. a corde \odot 100° 4' 52"
 Viceversa ab Aldebora 99 55 0
 Asc. R. ab infer. cap. Π 99 54 28
 Inuenta est Ascensio R. 99 54 $\frac{3}{4}$
 Declinatio Borea 21 5 $\frac{1}{2}$
 Resp. Longitudo $9^{\circ} 16' \odot$
 Latitudo 2 6 $\frac{1}{2}$ M.

Duodecima mag. 3^{ae}.
 Quæ est in ventre meridionali.
 Asc. R. a corde \odot 103° 50' 0"
 Viceversa 103 51 33
 Ascensio recta mediata 103 50 $\frac{3}{4}$
 Declinatio borea 22 40 $\frac{1}{2}$
 Resp. Longitudo $12^{\circ} 46' \odot$
 Latitudo 0 13 $\frac{2}{3}$ Auf.

Decima tertia mag. 4^{tae}.
 Australis trium seu in natibus.
 Asc. R. a corde \odot 103° 36' 35"
 Viceversa 103 35 44"
 Asc. recta verificata 103 36
 Declinatio borea 17 13
 Resp. Longitudo $13^{\circ} 3' \odot$
 Latitudo 5 41 Auf.

Decima quarta mag. 4^{tae}.
 Digitus pedum [Planta pedis potius]².
 Asc. R. ab infer. cap. Π 87° 31' 13"
 Viceversa 87 32 24
 Asc. recta emendata 87 31 50
 Declinatio borea 22 32 30
 Resp. Longitudo $27^{\circ} 43' \Pi$
 Latitudo 0 58 Auf.

Decima quinta mag. 3^{iae}.
 Planta pedis borej (Calx pedis).
 Asc. R. a corde \odot 89° 30' 15"
 Viceversa 89 32 7
 Asc. recta verificata 89 31
 Declinatio borea 22 38 $\frac{2}{3}$
 Resp. Longitudo $29^{\circ} 33\frac{1}{4}' \Pi$
 Latitudo 0 52 $\frac{1}{4}$ Auf.

Decima sexta mag. 4^{tae}.
 Quæ in inferiori pede Π superioris.
 Asc. R. a corde \odot 91° 7' 1"
 Viceversa 91 7 19
 Ascensio R. verificata 91 7 $\frac{1}{4}$
 Declinatio borea 20 23 $\frac{1}{4}$
 Resp. Longitudo $1^{\circ} 4' \odot$
 Latitudo 3 8 Auf.

Decima septima mag. 2^{dæ}.
 Lucida pedum Π .
 Asc. R. a corde \odot 93° 26' 58"
 Declinatio borea 16 40 $\frac{1}{4}$
 Resp. Longitudo $3^{\circ} 20\frac{1}{2}' \odot$
 Latitudo 6 48 $\frac{1}{2}$ Auf.

Decima octava mag. 4^{tae}.
 Duarum in infimo pede præcedens.
 Asc. R. a corde \odot 95° 33' 3"
 Viceversa 95 32 19
 Ascensio R. verificata 95 32 $\frac{2}{3}$
 Declinatio borea 13 15 $\frac{1}{2}$

¹ Declinatio 11' major est quam vera. Latitudo igitur esse debuit 2° 0'. Cf. T. III p. 412.

² Sic in codice.

Resp. Longitudo $5^{\circ} 19\frac{1}{3}$ ☉¹
 Latitudo 10 9 Aufst.

Decima nona mag. 6^{tae}.
 Calx pedis eiusdem austrini.

Afc. R. a corde ☉ 97° 52' 25''
 Viceversa 97 52 30
 Vera Ascensio Recta 97 52 $\frac{1}{2}$
 Declinatio borea 13 37 $\frac{2}{3}$
 Resp. Longitudo $7^{\circ} 46'$ ☉
 Latitudo 9 41 Aufst.

Vicesima magn. 6^{tae}.
 Quæ in genu inferioris ♀.

Afc. R. a corde ☉ 96° 42' 25''
 Viceversa 96 43 30
 Ascensio R. vera 96 43
 Declinatio borea 22 10 $\frac{1}{2}$
 Resp. Longitudo $6^{\circ} 13\frac{1}{2}'$ ☉
 Latitudo 1 12 Aufst.

Vicesima prima mag. 6^{tae}.
 Quæ in femore ♀ superioris.

Afc. R. a corde ☉ 99° 17' 52''
 Viceversa 99 19 21
 Ascensio R. verificata 99 18 $\frac{2}{3}$
 Declinatio borea 24 45 $\frac{1}{2}$
 Resp. Longitudo $8^{\circ} 27\frac{1}{2}'$ ☉
 Latitudo 1 31 borea

Vicesima secunda mag. 6^{tae}.
 Quæ in manu austrina, est proxime
 infra inferius caput.
 Afc. R. a corde ☉ 112° 4'

Viceversa ab Aldebora 112 3 50''
 Ascensio Recta 112 4
 Declinatio borea 27 45
 Resp. Longitudo $19^{\circ} 32'$ ☉
 Latitudo 5 44 borea

Vicesima tertia mag. 5^{tae}.
 Quæ est inter vtrumque ♀ caput.

Afc. R. a corde ☉ 109° 24' 48''
 Viceversa 109 23 33
 Afc. recta emendata 109 24
 Declinatio borea 29 47
 Resp. Longitudo $16^{\circ} 54\frac{1}{2}'$ ☉
 Latitudo 7 24 borea

Vicesima quarta mag. 5^{tae}.
 Ad aures superioris ♀^{orum}.
 Afc. R. a luc. ceruicis ☉ 105° 39' 30''
 Viceversa 105 40
 Ponatur Ascensio recta 105 40
 Declinatio borea 32 30
 Resp. Longitudo $13^{\circ} 21\frac{3}{4}'$ ☉
 Latitudo 9 42 borea

Vicesima quinta et vltima mag. 4^{tae}.
 Est præcedens ad summum pedem
 superioris ♀, diciturque προπους.

Afc. R. ab infer. cap. ♀ 84° 45' 56''
 Viceversa ab Aldeb. 84 47 30''
 Ascensio recta mediata 84 46 $\frac{2}{3}$
 Declinatio borea 23 12 $\frac{2}{3}$
 Resp. Longitudo $25^{\circ} 12'$ ♀
 Latitudo 0 13 Aufst.

ASTERISMUS ☉.

Omnes stellæ in Cancro præter nebulosum illum gyrum Præsepe dictum sunt numero 14 quarum

| | | | | | |
|-------------------|---|--------|------|---|--------------|
| magni- tudinis | { | tertiæ | funt | { | nebulosa vna |
| | | quartæ | | | 1 |
| | | quintæ | | | 3 |
| | | sextæ | | | 6 |

Prima. In pectore nebulosa media quæ præsepe vocatur.

Afc. R. a corde ☉ 124° 9'
 Viceversa ab inf. cap. ♀ 124 8 32
 Ascensio recta emend. 124 9
 Declinatio borea 21 4 $\frac{1}{4}$
 Resp. Longitudo $1^{\circ} 36\frac{1}{4}'$ ☉
 Latitudo 1 14 borea

¹ Debet esse $5^{\circ} 29'$ (error calculi).

Secunda, mag. 5^{tæ}.

Præcedentium borea in $\square^{\text{to}} \odot^{\text{ri}}$.
 Asc. R. a corde \odot 122° 10'
 Viceversa a luc. pede Π 122 9 $\frac{1}{2}$
 Declinatio borea 21 46 $\frac{3}{4}$
 Resp. Longitudo 29° 39' \odot
 Latitudo 1 31 $\frac{1}{2}$ borea.

Tertia mag. 5^{tæ}.

Australior præcedentium in \square^{to} .
 Asc. R. a corde \odot 121° 59'
 a luc. pede Π 122 0 25''
 Ascensio R. limitata 122 0
 Declinatio borea 19 26 $\frac{1}{2}$
 Resp. Longitudo 29° 59 $\frac{1}{2}$ ' \odot
 Latitudo 0 47 36 M.

Quarta, mag. 4^{tæ}. Afellus boreus.

Asc. R. a luc. pede Π 124° 47' 53''
 Viceversa a corde \odot 124 47 22
 Ascensio R. mediata 124 47 $\frac{2}{3}$
 Declinatio borea 22 54
 Resp. Longitudo 1° 46 $\frac{1}{2}$ ' \odot
 Latitudo 3 9 Borea

Quinta, mag. 4^{tæ}. Afellus australis.

Asc. R. a luc. pede Π 125° 14' 40''
 Viceversa a corde \odot 125 19 26
 Ascensio R. mediata 125 17
 Declinatio borea 19 37
 Resp. Longitudo 2° 58' \odot
 Latitudo 0 4 Aufst.¹

Sexta mag. 3^æ.

Media et lucidior in brancha australi.
 Asc. R. a luc. pede 128° 55' 43''
 Viceversa a corde \odot 128 58 8
 Ascensio R. emendata 128 57
 Declinatio borea 13 24
 Resp. Longitudo 7° 53 $\frac{1}{2}$ ' \odot
 Latitudo 5 8 Aufst.

Septima mag. 5^{tæ}.

In branchijs borealibus.
 Asc. R. a luc. pede Π 125° 20'
 Viceversa 125 24 40
 Ascensio R. media 125 22
 Declinatio borea 30 12
 Resp. Longitudo 0° 34' \odot
 Latitudo 10 23 borea

¹ Debet esse borealis.

Octava mag. 5^{tæ}. Borealis pes Cancri.

Asc. R. a corde \odot 115° 53'
 Viceversa a luc. pede Π 115 51 57''
 Ascensio R. limit. 115 52 $\frac{1}{2}$
 Declinatio borea 22 39 $\frac{1}{2}$
 Resp. Longitudo 23° 45 $\frac{1}{4}$ ' \odot
 Latitudo 1 15 $\frac{3}{8}$ B.

Nona mag. 5^{tæ}.

Pes australis Cancri.
 Asc. R. a corde \odot 115° 32'
 Viceversa a luc. pede Π 115 30 15''
 Declinatio borea 14 14 $\frac{1}{2}$
 Resp. Longitudo 24° 54' \odot
 Latitudo 7 5 Aufst.

Decima mag. 4^{tæ} minoris.

Quæ in cauda lucidior.
 Asc. R. a luc. ped. Π 117° 6' 50''
 Viceversa 117 7 52
 Ascensio R. emendata 117 7 $\frac{1}{8}$
 Declinatio borea 18 49 $\frac{2}{8}$
 Resp. Longitudo 25° 35 $\frac{1}{2}$ ' \odot
 Latitudo 2 18 $\frac{1}{2}$ Aufst.

Vndecima mag. 6^{tæ}.

Proxime sequens in dorso.
 Asc. R. a corde \odot 119° 55'
 Viceversa a luc. pede Π 119 54 15
 Ascensio R. limitata 119 54 35
 Declinatio borea 19 33 $\frac{1}{2}$
 Resp. Longitudo 28° 2 $\frac{1}{2}$ ' \odot
 Latitudo 1 4 Aufst.

Duodecima mag. 6^{tæ}.

Trium in australi branchio suprema.
 Asc. R. a corde \odot 128° 32'
 Viceversa a luc. ped. Π 128 30
 Ergo Asc. R. limitata 128 31
 Declinatio borea 16 50
 Resp. Longitudo 6° 37 $\frac{1}{4}$ ' \odot
 Latitudo 1 54 $\frac{1}{4}$ M.

Decima tertia mag. 5^{tæ} maioris.

Infimatrium in branchijs australibus.
 Asc. R. a lucid. pede Π 131° 18' 40''
 Viceversa a corde \odot 131 23 2
 Ascensio R. media 131 20 $\frac{3}{8}$
 Declinatio borea 12 17
 Resp. Longitudo 10° 26' \odot
 Latitudo 5 36 Aufst.

Decima quarta mag. 6^{tae}.

Superior in rostro.

Asc. R. a corde Ω 129° 37'Deinde a luc. ped. Π 129 37 $\frac{1}{6}$

Declinatio borea 26 1

Resp. Longitudo 5° 17' Ω

Latitudo 7 14 borea

Decima quinta mag. 6^{tae}.

Inferior & australis in rostro.

Asc. R. a corde Ω 131° 20 $\frac{1}{2}$ 'Viceversa a luc. ped. Π 131 21 9''Ergo Ascensio R. media 131 20 $\frac{3}{8}$

Declinatio borea 23 37

Resp. Longitudo 7° 26 $\frac{1}{2}$ ' Ω Latitudo 5 20 $\frac{1}{6}$ B.SIDUS Ω .Omnes in Ω stellæ sunt numero triginta, harum

| | | | |
|--------------|---------|------|----|
| magnitudinis | primæ | sunt | 2 |
| | secundæ | | 2 |
| | tertiæ | | 5 |
| | quartæ | | 11 |
| | quintæ | | 3 |
| | sextæ | | 7 |

Prima, mag. 4^{tae}.

Quæ est in naribus.

Asc. R. ab infer. cap. Π 135° 5'a cauda Ω 135 5 $\frac{5}{6}$ Ascensio R. emendata 135 5 $\frac{1}{3}$ Resp. Longitudo 9° 31 $\frac{1}{3}$ ' Ω Latitudo 10 23 $\frac{1}{6}$ boreaSecunda mag. 4^{tae}. Quæ est in ore.Asc. R. ab infer. cap. Π 136° 59'Viceversa a cauda Ω 137 0 $\frac{1}{6}$ Ergo Asc. R. emendata 136 59 $\frac{1}{2}$

Declinatio borea 24 45

Resp. Longitudo 12° 6 $\frac{1}{2}$ ' Ω Latitudo 7 52 $\frac{1}{4}$ boreaTertia mag. 4^{tae}. Borealis in capite.Asc. R. a cauda Ω 142° 15' 7''

Viceversa 142 16 21

Ascensio R. verificata 142 15 $\frac{2}{3}$

Declinatio borea 27 55

Resp. Longitudo 15° 41' Ω

Latitudo 12 21 borea

Quarta mag. 3^{tae}. Australis in capite.Asc. R. a cauda Ω 140° 29' 57''

Viceversa 140 33 28

Ascensio R. emendata 140 31 $\frac{2}{3}$

Declinatio borea 25 38

Resp. Longitudo 14° 55' Ω

Latitudo 9 40 borea

Quinta mag. 3^{tae} in collo borealis.

Asc. R. a Vindemiatore 148° 21' 54''

Viceversa 148 23 39

Ascensio R. verificata 148 22 $\frac{3}{4}$ Declinatio borea 25 26 $\frac{1}{3}$ Resp. Longitudo 21° 47 $\frac{1}{2}$ ' Ω

Latitudo 11 50 borea

Sexta mag. 2^{dæ}.

Media et lucida in collo.

Asc. R. a Vindemiatore 149° 15' 54''

Viceversa 149 15 49

Ascensio recta vera 149 15 50

Declinatio borea 21 53 45

Resp. Longitudo 23° 48 $\frac{3}{8}$ ' Ω Latitudo 8 47 $\frac{1}{2}$ boreaSeptima mag. 3^{tae}.

Infima trium in collo.

Asc. R. a Vindem. 146° 10' 9''

Viceversa ab inf. cap. Π 146 12 $\frac{1}{3}$ Ascensio recta media 146 11 $\frac{1}{4}$

Declinatio borea 18 45

Resp. Longitudo 22° 10' Ω Latitudo 4 51 $\frac{1}{2}$ boreaOctava magnit. 1^{tae}. Cor Ω .Asc. R. a Spica Π 146° 35' 33''

Viceversa 146 36 11

Ascensio recta vera 146 35 50

Declinatio borea 13 57 0

Resp. Longitudo 24° 8 $\frac{8}{8}$ ' Ω Latitudo 0 27 $\frac{1}{2}$ boreaNona mag. 5^{tae}.

Quæ est paulo infra cor.

Asc. R. a Cane minori 146° 29 $\frac{5}{8}$ 'Viceversa a cauda Ω 146 28 0

Afcensio R. emendata 146 29
 Declinatio Borea 12 0
 Resp. Longitudo $24^{\circ}40\frac{1}{2}'$ \odot
 Latitudo $1\ 25\frac{1}{2}$ M.

Decima mag. 4^{tæ}.
 Afc. R. a cauda \odot 143° 56 $\frac{2}{3}'$
 Viceversa respondet.
 Declinatio borea 14 22 $\frac{1}{4}$
 Resp. Longitudo $21^{\circ}33\frac{1}{3}'$ \odot
 Latitudo $0^{\circ}0\frac{1}{3}'$ Bor.

Vndecima mag. 6^{tæ}.
 In medio corpore.
 Afc. R. a cauda \odot 140° 17' 30"
 Viceversa a luc. pede II 140 15 10
 Afcensio R. limitata 146 16 20
 Declinatio Borea 15 49
 Resp. Longitudo $17^{\circ}44\frac{1}{3}'$ \odot
 Latitudo 0 16 B.

Duodecima mag. 4^{tæ}.
 Quæ est in anteriore pede.
 Afc. R. a cauda \odot 137° 26 $\frac{5}{6}'$
 Viceversa 137 26 $\frac{2}{3}$
 Afcensio R. media 137 26 $\frac{3}{4}$
 Declinatio borea 13 5
 Resp. Longitudo $15^{\circ}56\frac{2}{3}'$ \odot
 Latitudo 3 10 M.

Decima tertia mag. 4^{tæ}.
 Proxime sequens in altero pede.
 Afc. R. a cauda \odot 139° 44'
 Viceversa 139 45 $\frac{1}{2}$
 Afcensio R. media 139 44 $\frac{3}{4}$
 Declinatio B. 11 43 $\frac{3}{4}$
 Resp. Longitudo $18^{\circ}30\frac{1}{3}'$ \odot
 Latitudo 3 47 M.

Decima quarta mag. 4^{tæ}.
 Quæ est in drace sinistra.
 Afc. R. a cauda \odot 144° 36 $\frac{2}{3}'$
 Viceversa 144 38 $\frac{2}{3}$
 Afc. recta limitata 144 37
 Declinatio borea 9 59 $\frac{1}{2}$
 Resp. Longitudo $23^{\circ}36\frac{1}{3}'$ \odot
 Latitudo $3\ 55\frac{1}{3}$ M.

Decima quinta mag. 4^{tæ}.
 Quæ in axilla sinistra.
 Afc. R. a cane min. 152° 46' 37"
 melior
 Viceversa 152 43 36
 Afc. Recta media 152 45
 Declinatio borea 11 24
 Resp. Longitudo 0 38 \mathbb{M}
 Latitudo 0 8 borea

Decima sexta mag. 6^{tæ}. In ventre.
 Viceversa non est obseruata.
 Afc. R. a Spica \mathbb{M} 145° 20'
 Declinatio borea 16 12
 Resp. Longitudo $22^{\circ}14'$ \odot
 Latitudo 2 10 borea¹.

Decima septima mag. 6^{tæ}.
 Sequens in ventre.
 Afc. R. a præcedente in Cane minore
 156° 10' 15"
 a Spica \mathbb{M} 156 9
 Afcensio R. limitata 156 9 37
 Declinatio borea 16 21 $\frac{2}{3}$
 Resp. Longitudo $1^{\circ}56\frac{3}{5}'$ \mathbb{M}
 Latitudo $5\ 56\frac{1}{3}$ borea

Decima octava mag. 6^{tæ}.
 Afc. R. a Spica \mathbb{M} 156° 53'
 Viceversa 156 51 $\frac{1}{6}$
 Afcensio R. media 156 52
 Declinatio borea 12 43 $\frac{3}{4}$
 Resp. Longitudo $3^{\circ}55'$ \mathbb{M}
 Latitudo $2\ 49\frac{1}{3}$ borea

Decima nona mag. 5^{tæ}.
 Præcedens in lumbis.
 Afc. R. a Cane minore 160° 3' 25"
 Viceversa 159 59 15
 Afcensio R. media 160 1
 Declinatio borea 22 22
 Resp. Longitudo $3^{\circ}4'$ \mathbb{M}
 Latitudo 12 53 borea

Vicesima mag. 2^{dæ}.
 Lucida in lumbis.
 Afc. R. a Cane minore 163° 0' 47"
 Viceversa 162 59 9

¹ Falsa ascensione recta usus est Tycho. Distantiam enim a Spica d. 12. Febr. 1589 observavit $49^{\circ}46'$, $46\frac{3}{4}$, unde asc. recta reperitur $152^{\circ}30'.6$. Ex hac autem eruitur long. $28^{\circ}42\frac{1}{2}'$ \odot , lat. $4^{\circ}31\frac{1}{2}'$ (a. 1589).

Afcensio R. emendata 163 0 0
 Declinatio borea 22 47
 Resp. Longitudo $5^{\circ}30\frac{1}{2}'$ ♍
 Latitudo 14 20 borea

Vicesima prima mag. 6^{tae}.

Sequens ad austrum.

Afc. R. a præcedente Canis min.
 163° 38'

Viceversa ab Arcturo 163 36 $\frac{1}{3}$

Afcensio R. emendata 163 37 $\frac{1}{6}$

Declinatio borea 15 29

Resp. Longitudo $8^{\circ}57\frac{3}{8}'$ ♍

Latitudo 7 50 $\frac{1}{2}$ B.

Vicesima secunda mag. 3^{ae}.

Borealis in clune.

Afc. R. a Cane minore 163° 8' 17''

Viceversa 163 8 25

Afcensio R. emendata 163 8 $\frac{1}{3}$

Declinatio borea 17 41

Resp. Longitudo $7^{\circ}40'$ ♍

Latitudo 9 41 $\frac{1}{2}$ B.

Vicesima tertia mag. 3^{ae}.

Australis in clune.

Afc. R. a Cane minore 165° 36' 43''

Viceversa 165 37 15

Afcensio recta emend. 165 37

Declinatio borea 12 48

Resp. Longitudo $11^{\circ}48\frac{1}{2}'$ ♍

Latitudo 6 7 borea

Vicesima quarta mag. 4^{tae}.

Quæ in genu posteriori.

Afc. R. a Spica ♍ 164° 56'

Viceversa a corde ♍ 164 56 $\frac{1}{4}$

Declinatio borea 8 15 $\frac{1}{4}$

Resp. Longitudo $12^{\circ}58\frac{1}{6}'$ ♍

Latitudo 1 40 borea

Vicesima quinta mag. 4^{tae}.

Media in pede.

Afc. recta a corde ♍ 166° 41 $\frac{1}{4}'$

Viceversa 166 42 $\frac{1}{2}$

Afc. recta emendata 166 41 $\frac{1}{4}$

Declinatio borea 5 7

Resp. Longitudo $15^{\circ}46\frac{2}{3}'$ ♍

Latitudo 0 32 $\frac{5}{6}$ M.

Vicesima sexta mag. 4^{tae}.

Infima in pede ♍.

Afc. R. a Spica ♍ 168° 56 $\frac{1}{3}'$

Viceversa 168 57 $\frac{2}{3}$

Afcensio R. emendata 168 57

Declinatio borea 1 27 $\frac{1}{2}$

Resp. Longitudo $19^{\circ}16\frac{5}{6}'$ ♍

Latitudo 3 2 $\frac{1}{2}$ M.

Vicesima septima mag. 1^{ae}.

Cauda ♍.

Afc. R. a corde ♍ 171° 58' 25''

Viceversa 171 58 34

Vera Afcensio Recta 171 58 30

Declinatio borea 16 53 0

Resp. Longitudo $15^{\circ}53'$ ♍

Latitudo 12 18 borea

Vicesima octava mag. 6^{tae}.

Afcensio recta 137° 24'

Viceversa 137 19

Afcensio R. emendata 137 21 $\frac{1}{2}$

Declinatio borea 11 24

Resp. Longitudo $16^{\circ}21\frac{2}{3}'$ ♍

Latitudo 4 48 M.

Vicesima nona mag. 6^{tae}.

In præcedente pede ♍.

Afc. R. a cauda ♍ 136° 35 $\frac{1}{3}'$

Viceversa 136 35 $\frac{2}{3}$

Afcensio R. emendata 136 35 $\frac{1}{2}$

Declinatio borea 10 40

Resp. Longitudo $15^{\circ}51\frac{1}{3}'$ ♍.

Latitudo 5 43 $\frac{1}{4}$ M.

Tricesima mag. 6^{tae} minor.

In medio corpore fere, obscura.

Afc. R. a præcedente in cane minore

156° 4' 10''

Viceversa ab Arcturo 155 59 30

Afcensio R. limitata 156 1 50

Declinatio B. 21 4 40

Resp. Longitudo $0^{\circ}3\frac{3}{4}'$ ♍

Latitudo 10 17 $\frac{1}{4}$ B.¹.

¹ Adscriptum est: »Correcta in Latit. N. B.⁶.

ASTERISMUS \mathfrak{M} .

Stellæ in \mathfrak{M} sunt omnes numero triginta quatuor, ita se habent vt sint

| | |
|--------------|----------|
| magnitudinis | primæ 1 |
| | tertiæ 5 |
| | quartæ 7 |
| | quintæ 8 |
| | sextæ 13 |

Prima mag. 5^{ta}. Borealis in capite præcedentium.

| | |
|--|-------------|
| Afc. R. a Spica | 171° 1' 20" |
| a corde Ω | 170 59 38 |
| a bor. lance $\underline{\Omega}$ | 170 59 31 |
| Pone Afcen. R. veram | 171 0 0 |
| Declinatio borea | 10 32 40 |
| Resp. Longitudo 17° 34' \mathfrak{M} | |
| Latitudo 6 6 $\frac{2}{3}$ Bor. | |

Secunda mag. 5^{ta}. Australis præcedens in \square^{to} capitis.

| | |
|--|--------------|
| Afc. R. a Spica | 171° 10' 10" |
| Viceversa a bor. lance | 171 8 9 |
| Afcenſio R. emend. | 171 9 |
| Declinatio borea | 8 51 |
| Resp. Longitudo 18° 23' \mathfrak{M} | |
| Latitudo 4 37 Bor. | |

Tertia mag. 5^{ta}.

Sequentium in capite borealis.

| | |
|--|------------|
| Afc. R. a Spica | 176° 5' 0" |
| a corde Ω | 176 3 3 |
| a bor. lance $\underline{\Omega}$ | 176 3 52 |
| Afcenſio R. emendata | 176 3 40 |
| Declinatio borea | 11 2 40 |
| Resp. Longitudo 21° 57' \mathfrak{M} | |
| Latitudo 8 33 $\frac{1}{2}$ Bor. | |

Quarta mag. 5^{ta}.

Australis ſequentium in cap. \mathfrak{M} .

| | |
|--|--------------------|
| Afc. R. a Spica | 174° 57' 2" |
| a corde Ω | 174 54 49 |
| a bor. lance | 174 56 25 |
| Afcenſio R. emend. | 174 56 |
| Declinatio borea | 8 55 $\frac{1}{2}$ |
| Resp. Longitudo 21° 48' \mathfrak{M} | |
| Latitudo 6 10 Bor. | |

Quinta mag. 3^{ta}.

Prima extrema alæ australis.

| | |
|--|-------------------|
| Afc. R. a Spica | 172° 20' 10" |
| a corde Ω | 172 21 48 |
| a bor. lance | 172 20 52 |
| Afcenſio R. emend. | 172 21 |
| Declinatio borea | 4 5 $\frac{3}{4}$ |
| Resp. Longitudo 21° 22' \mathfrak{M} | |
| Latitudo 0 43 Bor. | |

Sexta mag. 4^{ta}.

Sequens in ſiniſtra ala.

| | |
|---|--------------|
| Afc. R. a Spica | 179° 43' 57" |
| a corde Ω | 179 44 21 |
| a bor. lance | 179 43 7 |
| Afcenſio Recta vera | 179 44 0 |
| Declinatio borea | 1 39 40 |
| Resp. Longitudo 29° 5' 50" \mathfrak{M} | |
| Latitudo 1 25 Borea | |

Septima mag. 3^{ta}. Tertia in ala, eſt in recta linea cum Vindemiatore et cingulo \mathfrak{M} .

| | |
|---|--------------|
| Afc. R. a Spica | 185° 11' 28" |
| a corde Ω | 185 11 33 |
| a bor. lance | 185 11 40 |
| Afcenſio R. verificata | 185 11 30 |
| Declinatio borea | 0 49 30 |
| Resp. Longitudo 4° 26' $\underline{\Omega}$ | |
| Latitudo 2 49 $\frac{2}{3}$ B. | |

Octava mag. 6 minor ſeu obſcura.

Quæ eſt inter vltimam et penultimam alæ Australis.

Afc. R. a 6^{ta} eiusdem alæ 189° 26'
Viceversa a Bor. lance $\underline{\Omega}$ 189 30 Hæc
Afc. R. retineatur vtpote melior, nam
bis terve ab hac in diſtancia obſeruata
invenitur¹.

| | |
|--|------|
| Declinatio Auſt. | 1 30 |
| Resp. Longitudo 9° 18 $\frac{1}{2}$ ' $\underline{\Omega}$ | |
| Latitudo 2 23 $\frac{2}{3}$ B. | |

Nona, mag 4^{ta}.

Vltima in aſtrali ala \mathfrak{M} .

| | |
|---|-------------|
| Diſtancia a cauda Ω | 28° 21' 20" |
| Afc. R. a cauda Ω | 192 7 45 |
| Viceversa a bor. lance $\underline{\Omega}$ | 192 10 20 |

¹ Error tamen ſubeſt in aſcenſione recta. Die 14 Mart. 1589 diſtanciam a boreali lance invenit 34° 35 $\frac{1}{2}$ ', unde afc. rect. invenitur 189° 36'. 3, ex qua eruitur Long. 9° 24' $\underline{\Omega}$, Lat. 2° 26' B. (1589).

Afcenf. R. limitata 192 9 0
 Declinatio Aufst. 3 19
 Resp. Longitudo $12^{\circ}26\frac{3}{4}'$ Ω
 Latitudo 1 $45\frac{1}{4}$ B.

Decima mag. 3^{ae}.

Cingulum seu sub cingulo in dextro latere.

Afc. R. a corde Ω 188°44' 15"
 Viceversa a bor. lance 188 42 57
 Ascenf. recta emend. 188 43 $\frac{1}{2}$
 Declinatio borea 5 40 $\frac{2}{3}$
 Resp. Longitudo $5^{\circ}45'$ Ω
 Latitudo 8 41 Bor.

Vndecima mag. 5^{ae}.

Præcedens Vindemiorem.

Afc. R. a corde Ω 185°14' 49"
 Viceversa a bor. lance 185 16 34
 Ascensio recta emend. 185 15 $\frac{2}{3}$
 Declinatio borea 12 34 $\frac{1}{4}$
 Resp. Longitudo $29^{\circ}43'$ \mathbb{M}
 Latitudo 13 36 $\frac{2}{3}$ Bor.

Duodecima mag. 6^{ae}.

Superior duarum paruularum inter Vindemiorem et cingulum.

Afc. R. a corde Ω 186°14' 38"
 Viceversa a bor. lance 186 13 38"
 Ascensio R. verificata 186 14
 Declinatio borea 9 58 $\frac{1}{4}$
 Resp. Longitudo $1^{\circ}41\frac{3}{4}'$ Ω
 Latitudo 11 37 Bor.

Decima tertia mag. 3^{ae}.

Vindemior \mathbb{M} .

Afc. R. a corde Ω 190°24' 37"
 Viceversa a bor. lance 190 29 17
 Ascensio R. media 190 27
 Declinatio borea 13 12 $\frac{1}{2}$
 Resp. Longitudo $4^{\circ}13\frac{1}{2}'$ Ω
 Latitudo 16 15 $\frac{2}{3}$ Bor.

Decima quarta mag. 1^{ae}.

Ipfa Virginis Spica.

Ex obseruationibus Aⁱ 86 et 87 præsupponitur hic vera Ascensio Recta Spicæ \mathbb{M} 195°55' 0"

Declinatio Aufst. 8 57 15
 Resp. Longitudo $18^{\circ}6\frac{1}{4}'$ Ω
 Latitudo 1 $59\frac{1}{8}$ Aufst.

Decima quinta mag. 3^{ae}.

Quæ est iuxta vertebram.

Afc. recta a bor. lance 198°23 $\frac{2}{3}'$
 Declinatio Borea 1 32

Retineatur illa Afc. recta a borea lance, quam veram esse ex obseruationibus in 24 anno 90 deprehendi, et corrigantur long. et latit. in Catalogo stellarum.

Resp. Long. $16^{\circ}31'$ Ω
 Lat. 8 $39\frac{1}{6}$ B.¹

Decima sexta mag. 6^{ae}.

Ascensio R. a prima australis alæ \mathbb{M} 197°40'
 a corde Ω 197 36
 Ascenf. R. emendata 197 38
 Declinatio aufst. 4 4
 Resp. Longitudo $17^{\circ}48\frac{1}{4}'$ Ω
 Latitudo 3 $10\frac{5}{8}$ B.

Decima septima mag. 6^{ae}.

Non est obseruabilis.

Decima octava mag. 6^{ae}.

Afc. R. a prima aufst. alæ 200° 3' 50"
 Viceversa a bor. lance Ω 200 2 0
 Ascenf. R. limitata 200 2 50
 Declinatio aufst. 6 35
 Resp. Longitudo $20^{\circ}59\frac{1}{6}'$ Ω
 Latitudo 1 $45\frac{2}{3}$ B.

Decima nona mag. 6^{ae}.

Afc. R. a prima aufst. alæ 197°56' 0"
 Viceversa a bor. lance Ω 197 54 30
 Ascensio R. limitata 197 55 $\frac{1}{4}$
 Declinatio aufst. 7 58 30
 Resp. Longitudo $19^{\circ}33\frac{3}{4}'$ Ω
 Latitudo 0 $19\frac{1}{2}$ M.

Vicesima mag. 6^{ae} minor.

Afc. R. a prima aufst. alæ 203°38 $\frac{1}{2}'$
 Viceversa a bor. lance Ω 203 35 $\frac{2}{3}$

¹ Hæc in codice post confectum catalogum mille stellarum addita sunt. Nam prius hæc conscripta erant fed lineis inducta: »Afc. R. a cauda Ω $197^{\circ}9\frac{1}{3}'$, Resp. Longitudo $15^{\circ}12\frac{1}{3}'$ Ω Latitudo $8^{\circ}10\frac{1}{6}'$ B.«. Hic locus in Catalogo reperitur. Cf. T. III p. 412.

Afcenf. R. limitata 203 37
 Declinatio auf. 7 18
 Resp. Longitudo $24^{\circ}34' \frac{\Omega}{\Omega}$
 Latitudo 2 24 $25 \frac{1}{2}$ B.¹

Vicesima prima mag. 5^{tæ}.

Quæ est in superiori fimbria.

Afc. R. a bor. manu Oph. $209^{\circ}37 \frac{1}{4}$
 a sequenti & australi
 in fin. manu Ophiuchi 209 $35 \frac{3}{4}$
 Ascensio R. limitata 209 $36 \frac{1}{2}$
 Declinatio M. 0 21
 Resp. Longitudo $27^{\circ}38 \frac{3}{4} \frac{\Omega}{\Omega}$
 Latitudo 11 $2 \frac{1}{2}$ B.

Vicesima secunda mag. 4^{tæ}.

Media trium est in fimbria.

Afc. R. a cauda Ω 208 $^{\circ}34'$
 Viceversa 208 38
 Ergo Afc. R. emendata 208 36
 Declinatio austrina 3 $57 \frac{1}{2}$
 Resp. Longitudo $27^{\circ}58 \frac{1}{4} \frac{\Omega}{\Omega}$
 Latitudo 7 $18 \frac{1}{2}$ B.

Vicesima tertia mag. 4^{tæ}.

Infima et australis in fyrmate.

Ascensio recta 207 $^{\circ}42'46''$
 Viceversa 207 44 31
 Ascensio recta emend. 207 $43 \frac{2}{3}$
 Declinatio Auf. 8 $16 \frac{5}{6}$
 Resp. Longitudo $28^{\circ}41' \frac{\Omega}{\Omega}$
 Latitudo 2 $57 \frac{1}{2}$ Bor.

Vicesima quarta mag. 4^{tæ} minor.

Afc. R. a sexta alæ Π 211 $^{\circ}47'$
 Viceversa a manu
 fin. Oph. 211 $44 \frac{1}{6}$
 Ascensio R. limitata 211 $45 \frac{1}{2}$
 Declinatio Auf. 0 $20 \frac{1}{2}$
 Resp. Longitudo $29^{\circ}41 \frac{1}{2} \frac{\Omega}{\Omega}$
 Latitudo 11 48 B.

Vicesima quinta mag. 4^{tæ}.

Australis pes.

Ascensio recta 209 $^{\circ}13'56''$
 Viceversa 209 14 40
 Ascensio R. emend. 209 14
 Declinatio Austr. 11 26
 Resp. Longitudo $1^{\circ}11 \frac{3}{4} \frac{\Pi}{\Pi}$
 Latitudo 0 $31 \frac{3}{4}$ Bor.

Vicesima sexta mag. 4^{tæ}.

Borealis seu dexter pes.

Ascensio recta 215 $^{\circ}20'8''$
 Viceversa 215 24 45
 Ascensio R. media 215 $22 \frac{1}{2}$
 Declinatio Auf. 3 $45 \frac{1}{4}$
 Resp. Longitudo $4^{\circ}20' \frac{\Pi}{\Pi}$
 Latitudo 9 49 Bor.

Vicesima septima mag. 6^{tæ}.

Afc. R. a prima australis alæ Π

203 $^{\circ}26'20''$
 Viceversa a bor. lance $\frac{\Omega}{\Omega}$ 203 27 10
 Ascensio R. limitata 203 26 45
 Declinatio borea 0 35
 Resp. Longitudo $21^{\circ}27 \frac{1}{2} \frac{\Omega}{\Omega}$
 Latitudo 9 $40 \frac{1}{2}$ B.

Vicesima octava mag. 6^{tæ}.

Inferior duarum inter Vindemiato-
 rem et cingulum Π .

Ascensio recta 185 $^{\circ}17'18''$
 Semel tantum obseruata.
 Ascensio recta 185 17
 Declinatio borea 9 5
 Resp. Longitudo $1^{\circ}11' \frac{\Omega}{\Omega}$
 Latitudo 10 26 Bor.

Vicesima nona mag. 6^{tæ}.

Quæ in ceruice.

Afc. R. a boreali lance $\frac{\Omega}{\Omega}$ 179 $^{\circ}48'10''$
 a Spica Π 179 46 40
 Ascensio R. limitata 179 47 20
 Declinatio borea 5 32
 Resp. Longitudo $27^{\circ}35 \frac{1}{2} \frac{\Pi}{\Pi}$
 Latitudo 4 $59 \frac{1}{3}$ B.

Tricesima mag. 6^{tæ}.

Paruula sequens Vindemiatozem.

Ascensio recta 194 $^{\circ}2'3''$
 Viceversa 194 6 11
 Ascensio recta media 194 4
 Declinatio borea 11 $37 \frac{1}{2}$
 Resp. Longitudo $8^{\circ}15' \frac{\Omega}{\Omega}$
 Latitudo 16 14 Bor.

Tricesima prima mag. 5^{tæ}.

Afc. R. a cauda Ω 194 $^{\circ}11'50''$
 a luc. ceruicis Ω 194 12 50

¹ Hæc stella est B. D. — 8° . 3667, mag. 6. 4. In *Uranometria nova* Argelandri 6^{tæ} mag.

Ascens. R. limitata 194 12 20
 Declinatio borea 7 40 30
 Resp. Longitudo $10^{\circ} 1' \underline{\Omega}$
 Latitudo 12 $40\frac{1}{2}$ B.

Tricesima secunda mag. 6^{tae}.

Media trium in recta linea alae superioris.

Ascensio recta 198° 17' 44''
 Viceversa 198 21 17
 Ascensio R. emend. 198 19
 Declinatio borea 5 49½
 Resp. Longitudo $14^{\circ} 36' \underline{\Omega}$
 Latitudo 12 $34\frac{1}{2}$ Bor.

Tricesima tertia mag. 6^{tae}.
 Quæ est inter quartam & quintam \mathfrak{M} .

Ascensio recta 174° 43' 26''
 Viceversa 174 42 0
 Ascensio recta emend. 174 42½
 Declinatio borea 5 58½
 Resp. Longitudo $22^{\circ} 46\frac{1}{2}' \mathfrak{M}$
 Latitudo 3 $22\frac{1}{2}$ Bor.

Tricesima quarta mag. 5^{tae}.

Ultima in superiori ala \mathfrak{M} .

Asc. R. a bor. in sinistra manu
 Ophiuchi 205° 15' 40''
 Item a boreali lance $\underline{\Omega}$ 205 12 40
 Ascens. R. limitata 205 14 0
 Declinatio borea 3 35
 Resp. Longitudo $22^{\circ} 0\frac{3}{4}' \underline{\Omega}^1$
 Latitudo 13 $7\frac{1}{2}$ B.

LIBRÆ $\underline{\Omega}$.

Omnes stellæ in hoc fidere sunt numero decem.

| | | | | | |
|--------|---|---|-------------------|---|---------------|
| quarum | { | 2 | funt magnitudinis | { | secundæ |
| | | 1 | | | tertiæ minor. |
| | | 4 | | | quartæ |
| | | 2 | | | quintæ |
| | | 1 | | | sextæ |

Prima. In extrema austrina chele duarum lucens et dicitur Australis lanx, estque mag. 2^{dæ}.

Ascensio recta 217° 5' 6''
 217 4 53
 Ascensio R. verificata 217 5 0
 Declinatio Austrina 14 14 40
 Resp. Longitudo $9^{\circ} 20\frac{3}{4}' \mathfrak{M}$
 Latitudo 0 26 Bor.

Secunda mag. 5^{tae}.

Quæ est supra Australem lancem.

Asc. R. a Spica \mathfrak{M} 216° 49½'
 Viceversa 216 44½
 Ascens. R. emendata 216 46½
 Declinatio Aust. 12 34½
 Resp. Longitudo $8^{\circ} 32' 0'' \mathfrak{M}$
 Latitudo 1 55 B.

Tertia mag. 2^{dæ}.

Sequens lucidior, estque lanx borealis.

Ascens. recta emend. 223° 45'
 Declinatio Australis 7 46 45''
 Resp. Longitudo $13^{\circ} 38\frac{5}{6}' \mathfrak{M}$
 Latitudo 8 $35\frac{1}{2}$ Borea

Quarta mag. quartæ. Supra borealem lancem ad occasum vergens.

Asc. R. a Spica \mathfrak{M} 219° 43½'
 Viceversa 219 47
 Ascensio recta emendata 219 45
 Declinatio Aust. 6 48½
 Resp. Longitudo $9^{\circ} 30\frac{1}{2}' \mathfrak{M}$
 Latitudo 8 $18\frac{3}{4}$ B.

Quinta magnitudinis sextæ.

Secunda ab australi lance ad ortum.

Asc. R. a Spica 224° 33½'
 Viceversa non habetur.
 Ascensio recta emendata 224 33
 Declinatio Austrina 13 52½
 Resp. Longitudo $16^{\circ} 8\frac{5}{6}' \mathfrak{M}$
 Latitudo 2 $58\frac{1}{2}$ B.

¹ Codex habet $20^{\circ} 0\frac{3}{4}'$. 22° recte in Progymnasmatibus et in catalogo mille stellarum.

Sexta magn. 5^{tae}.
 Prima ab Australi lance ad ortum.
 Asc. R. a Spica 220° 59'
 Viceversa 221 1½
 Ascens. recta emendata 221 0
 Declinatio Austrina 14 38½
 Resp. Longitudo 12° 16½' M.
 Latitudo 1 14½ B.

Septima mag. 3^{tie} minor.
 Tertia in recta linea ad ortum ab
 Australi lance.
 Asc. R. a Spica M 228° 9'
 Viceversa 228 11
 Ascens. R. verificata 228 10
 Declinatio Austrina 13 19½
 Resp. Longitudo 19° 22½' M
 Latitudo 4 28 Borea

Octava mag. 4^{tae}.
 Infra septimam, vltimaque ad or-
 tum.
 Asc. R. a Spica 230° 17½'
 Viceversa 230 18½

Ascensio R. emendata 230 18
 Declinatio Austrina 14 18½
 Resp. Longitudo 21° 38½' M
 Latitudo 4 3¼ borea

Nona magnitudinis quartæ.
 Quæ est infra 7^{timam} ad occasum.
 Asc. R. a Spica 227° 29¾'
 Viceversa 227 28½
 Ascens. R. limitata 227 29
 Declinatio Austr. 15 20½
 Resp. Longitudo 19° 17' M
 Latitudo 2 21 Borea

Decima magnit. 4^{tae} minor.
 Quæ est paulo infra borealem lan-
 cem ad ortum.
 Asc. R. a Spica 225° 30½'
 Eadem omnino viceversa
 Declinatio Austrina 8 47
 Resp. Longitudo 15° 36' M
 Latitudo 8 7¼ borea

SIDUS SCORPIJ M.

Stellæ omnes Scorpij quæ nostrum
 conscendunt horizontem numero sunt
 12, quarum

| | | | | | |
|-------------------|---|---------|------|---|----------|
| magni- tudinis | { | primæ | funt | { | 1 |
| | | secundæ | | | 1 minor. |
| | | tertiæ | | | 2 |
| | | quartæ | | | 5 |
| | | quintæ | | | 1 minor. |
| | | sextæ | | | 2 |

Prima mag. 2^{dæ} minor.
 Suprema in fronte M.
 Asc. R. ab australi lance Ω 235° 24'
 Viceversa eadem fere
 Declinatio Austrina 18 35½
 Resp. Longitudo 27° 25½' M
 Latitudo 1 5 B.

Secunda mag. 3^{tie}. Media in fronte.
 Asc. R. ab Aust. lance 234° 1' 32"
 Viceversa, hæc melior 234 2¾

Ascens. R. emendata 234 2
 Declinatio Austrina 21 22
 Resp. Longitudo 26° 49' M
 Latitudo 1 54½ M.

Tertia mag. 3^{tie}. Meridionalis in fronte
 M seu infima trium lucidarum.
 Asc. R. ab Aust. lance 233° 35½'
 Viceversa 233 35½
 Ascens. R. limitata 233 35½
 Declinatio Austr. 24 50
 Resp. Longitudo 27° 14½' M
 Latitudo 5 22½ M.

Quarta magnitud. 4^{tae}.
 Quæ magis ad austrum est in pede.
 Asc. R. a 17 stella in cauda
 Serpentis Ophiuchi 233° 6' femel
 Declinatio Austrina 27 54
 Resp. Longitudo 27° 33½' M
 Latitudo 8 27½ M.

¹ Longitudo esse debet 13° 5', latitudo 1° 14½'. Error calculis debetur, asc. recta et declinatio recte se habent.

Quinta, quartæ magnit. minor.

Borealißima frontis \mathbb{M} , in cuspide trianguli.

Afc. R. ab Außtrali lance 237° 3'

Viceversa 237 4 $\frac{2}{3}$

Afcenfio R. emendata 237 3 $\frac{1}{2}$

Declinatio Aufst. 18 19

Resp. Longitudo 28° 53 $\frac{1}{2}$ ' \mathbb{M}

Latitudo 1 42 $\frac{1}{6}$ ' B.

Sexta mag. 5^{tæ}. Paruula in triangulo cum lucida frontis \mathbb{M} et quinta.

Afc. R. ab Außtrali lance 235° 42 $\frac{2}{3}$ '

Viceversa 235 46

Afcenfio R. emendata 235 44

Declinatio Auftrina 19 32 $\frac{1}{2}$

Resp. Longitudo 27° 57' \mathbb{M}

Latitudo 0 13 $\frac{3}{4}$ ' B.

Septima mag. 4^{tæ}. Præcedens cor in pectore ad Boream.

Afc. R. ab Aufst. lance 239° 3 $\frac{1}{2}$ '

Viceversa 239 3 $\frac{1}{4}$

Ponatur Afcenfio Recta 239 3

Declinatio Aufst. 24 28

Resp. Longitudo 2° 0 $\frac{3}{4}$ ' \times

Latitudo 3 55 A.

Octava magnit. primæ. Cor Scorpj.

Afcenfio recta colligitur ex obseruationibus præcedentium aliquot annorum 241° 8'

Declinatio Aufst. 25 24 $\frac{1}{2}$

Resp. Longitudo 4° 3 $\frac{1}{2}$ ' \times

Latitudo 4 27 $\frac{3}{4}$ ' M.

Nona mag. quartæ.

Quæ cor sequitur ad eorum.

Afc. R. ab Aufst. lance 242° 37'

Viceversa 242 37 $\frac{1}{2}$

Afcenf. R. quæ retineatur 242 37

Declinatio Auftrina 27 14

Resp. Longitudo 5° 43' \times

Latitudo 5 50 $\frac{1}{4}$ ' M.¹

Decima mag. 6^{tæ} maior. Præcedens duarum paruularum in inferioribus pedibus.

Afc. R. a 17 Serp. Oph. 236° 53'

Non viceversa

Declinatio Aufst. 26 49

Resp. Longitudo 0° 36 $\frac{1}{6}$ ' \times

Latitudo 6 37 $\frac{2}{3}$ ' M.

STELLARUM \times LOCA EARUM QUÆ OBSERUARI POTERANT.

4^{ta} mag. 5^{tæ} mai.

Quæ est in arcu \times trii.

Afc. R. ab infer. in cornu \mathbb{Z} 270° 39' 37''

Viceversa a luc.

caudæ \mathbb{Z} 270 43 $\frac{1}{2}$

Afcenfio R. emendata 270 41 $\frac{1}{3}$

Declinatio Auftrina 25 31

Resp. Longitudo 0° 37 $\frac{2}{5}$ ' \mathbb{Z}

Latitudo 2 0 $\frac{1}{6}$ ' M.

5^{ta} mag. 4^{tæ} 2.

In superiori extensione arcus.

Afc. R. ab infer. cornu \mathbb{Z} 267° 21'

Viceversa a 14 Serpentis³.

Declinatio pro refractione

emendata 21 2 $\frac{2}{3}$

Resp. Longitudo 27° 31 $\frac{1}{3}$ ' \times

Latitudo 2 27 $\frac{1}{2}$ ' B.

6^{ta} mag. 4.

Quæ est in sinistro humero.

Afc. R. ab infer. cornu \mathbb{Z} 277° 32' 14''

a dextro humero \approx 277 29 54

Afcenfio R. verificata 277 31

Declinatio Auftrina 26 41 $\frac{1}{2}$

Resp. Longitudo 6° 40 $\frac{2}{3}$ ' \mathbb{Z}

Latitudo 3 31 Merid.⁴.

¹ Latitudo debet esse 5° 59 $\frac{1}{2}$ '. Error calculi vel lapsus calami.

² In codice inter stellas 14 et 15 posita. In margine adscriptum est: »Sequentes \times Anno 1590 obseruatæ, sed ad initium 89 reductæ«.

³ Adscriptum est in margine: »Inquiratur locus 14 Serpentis«.

⁴ Longitudo debet esse 6° 43 $\frac{1}{2}$ ', latitudo 3° 21' M.

7^a mag. 6^{tæ} mai.

In iaculo quæ sequens est.

| | |
|--|---------------------|
| Afc. R. ab inf. cornu γ | 275° 1' 13'' |
| Viceversa | 275 4 $\frac{1}{2}$ |
| Ascensio R. limitata | 275 2 $\frac{3}{4}$ |
| Declinatio Auftrina | 27 16 |
| Resp. Longitudo 4° 29 $\frac{1}{4}$ ' γ | |
| Latitudo 3 49 $\frac{1}{2}$ M. | |

9^{na} mag. 4^{tæ}.

Trium in capite \times^{γ} præcedens.

| | |
|--|----------------------|
| Afc. R. ab inf. cornu γ | 278° 21' 27'' |
| a dextro humero \approx | 278 21 19 |
| Ascensio Recta 9 ^æ | 278 21 $\frac{1}{2}$ |
| Declinatio Auftrina | 21 33 |
| Resp. Longitudo 7° 46 $\frac{1}{2}$ ' γ | |
| Latitudo 1 44 $\frac{1}{2}$ B. | |

10^a mag. 5^{tæ}. Media capitis \times^{γ} .

| | |
|--|---------------------|
| Afc. R. ab inf. cornu γ | 280° 2' 0 |
| a dextro humero \approx | 280 2 55'' |
| Ascensio recta 10 ^æ | 280 2 $\frac{1}{2}$ |
| Declinatio Auftrina | 22 13 $\frac{2}{3}$ |
| Resp. Longitudo 9° 17 $\frac{1}{2}$ ' γ | |
| Latitudo 0 58 Bor. | |

11^a mag. 4^{tæ}. Vltima capitis \times^{γ} .

| | |
|----------------------------------|---------------------|
| Afc. R. ab inf. cornu γ | 281° 21' 34'' |
| a dextro humero \approx | 281 20 8 |
| Ascensio Recta 11 ^æ | 281 21 |
| Declinatio Auftrina | 21 35 $\frac{1}{3}$ |
| Resp. Longitudo 10° 33' γ | |
| Latitudo 1 31 $\frac{1}{6}$ B. | |

12^{ma} 1 obscura. Prima in contactu \times^{γ} .

| | |
|---|-------------------------|
| Afc. R. a lucida caudæ | 283° 25 $\frac{1}{2}$ ' |
| Viceversa a 10 | |
| in manu Oph. | 283 15 |
| Ascensio recta media | 283 20 |
| Declinatio Auftr. | 19 50 |
| Resp. Longitudo 12° 33 $\frac{2}{3}$ ' γ | |
| Latitudo 3 6 $\frac{2}{3}$ B. | |

13^a mag. 4^{tæ}.

In boreo contactu media.

| | |
|---|----------------------|
| Afc. R. ab inf. cornu γ | 284° 27' |
| Viceversa a 10 | |
| in manu Oph. | 284 28 $\frac{2}{3}$ |
| Ascensio R. limitata | 284 27 $\frac{5}{6}$ |
| Declinatio Auftrina | 18 32 $\frac{1}{2}$ |
| Resp. Longitudo 13° 44 $\frac{1}{2}$ ' γ | |
| Latitudo 4 17 B. | |

¹ In codice inter 17 et 19 posita.

14^{ta} mag. 5^{tæ}.

Sequens & superior in contactu.

| | |
|--|---------------------|
| Afc. R. ab inf. cornu γ | 284° 31' |
| Vice versa a 10 | |
| in manu Oph. | 284 35 |
| Ascensio R. emendata | 284 33 |
| Declinatio Auftrina | 16 39 $\frac{1}{4}$ |
| Resp. Longitudo 14° 0 $\frac{5}{8}$ ' γ | |
| Latitudo 6 9 $\frac{1}{2}$ Bor. (bona). | |

15 magnitudinis 6^{tæ} minor.

Orientalis et infima in paruo triangulo in medio superioris contactus (cæteræ autem inobseruabiles sunt in dicto triangulo).

| | |
|---|---------------|
| Afc. R. a luc. caudæ γ | 289° 47' 58'' |
| Viceversa a penultima | |
| caudæ Serpentis | 289 47 54 |
| Declinatio Auftr. | 17 5 |
| Resp. Longitudo 18° 58 $\frac{1}{2}$ ' γ | |
| Latitudo 5 8 Borea. | |

16 mag. 6^{tæ} min. Orientalis & vltima in superiori contactu.

| | |
|---|----------------------|
| Afc. R. a luc. caudæ Oph. | 293° 40' |
| Viceversa a penult. | |
| caud. Serp. | 293 35 $\frac{1}{2}$ |
| Ascensio R. emendata | 293 37 $\frac{3}{4}$ |
| Declinatio Auftr. | 16 28 |
| Resp. Longitudo 22° 42 $\frac{1}{2}$ ' γ | |
| Latitudo 5 12 B. | |

17 obscura scilicet in inferiori contactu ad ortum.

| | |
|---|-------------------------|
| Afc. R. a luc. caudæ γ | 290° 39 $\frac{1}{6}$ ' |
| Viceversa a 10 ^{ma} Ophiuchi | 290 34 $\frac{1}{3}$ |
| Afc. R. emendata | 290 36 $\frac{3}{4}$ |
| Declinatio Auftr. | 20 44 |
| Resp. Longitudo 19° 14 $\frac{1}{8}$ ' γ | |
| Latitudo 1 24 $\frac{2}{3}$ B. | |

19 obscura in dextro cubito \times^{γ} .

| | |
|---|------------------------|
| Distat a luc. caudæ | 31° 34 $\frac{1}{3}$ ' |
| Hinc Afc. R. | 287 53 $\frac{1}{6}$ |
| Viceversa ab occident. cap. \times^{γ} | |
| distat. 9° 37 $\frac{1}{2}$, hinc Afc. R. | 288 15 50 |
| Ascensio recta limit. | 288 4 |
| Decl. Auftr. pro refractione | |
| emendata | 25 39 |
| Resp. Longitudo 16° 15 $\frac{3}{8}$ ' γ | |
| Latitudo 3 8 $\frac{1}{3}$ M. | |

CAPRICORNUS ♑.

Prima, mag. 3^{ae}. Borealis trium in cornu ♑. Superius cornu.

Afc. R. a dextro hum. ☿ 298° 46' 32''

Viceversa a capite Oph. 298 46 54

Afcensio R. emendata 298 46³/₄

Declinatio Aufrina 13 42

Resp. Longitudo 28° 7³/₈' ♑.

Latitudo 7 2¹/₂ Bor.

Secunda mag. 6^{tae}.

Media in eodem cornu.

Afc. R. a 1^{ma} alæ Peg. 299° 21²/₅'

Declinatio Aufrina 13 45¹/₄

[Afc. R. a luc. hum. Oph. 299 32¹/₂

De hac Afc. R. magis dubitatur.

Afcensio R. emendata 299 25]¹

Tertia mag. 3^{ae}. Earundem in eodem cornu australis. Inferius cornu.

Afc. R. ab inf. cornu ♑ 299° 29' 19''

Viceversa a cap. Oph. 299 27 42²

Afcensio R. emendata 299 28¹/₂

Declinatio Aufrina 15 58¹/₄

Resp. Longitudo 28° 20³/₈' ♑

Latitudo 4 41 Bor.

Quarta, nebulosa in præcedente cornu.

Afc. R. a 10^{ma} Oph.

(fcil. in dextra manu) 297° 16' 0''

Declinatio Aufrina 13 42¹/₂

Afc. R. a lucida caudæ ♑ 297 35¹/₂,

hæc videtur melior³.

Quinta, nebulosa in basi occidentali parui trianguli in fronte ♑.

Afc. R. a dextra manu Ophiuchi

300° 51¹/₆'

Declinatio Aufrina⁴ 19 41

Viceversa ab inf.

cornu ♑ 300 36 20

Pone Afcensionem rectam 300 45

Sexta nebulosa.

In basi eiusdem trianguli orientalior.

Afc. R. a dextra manu Oph. 301° 44' 0''

a luc. cauda ♑ 301 27 26

Pone Afcensf. rectam 301 35

Declinatio Aufst. 19 52 0

Septima, mag. 6^{tae}.

Orientalis trium in capite.

Afc. R. a 1^{ma} alæ Peg. 301° 17²/₃'

Viceversa a 10^{ma} manus

Oph. 301 21

Ergo Afcensf. R. limitata 301 19¹/₃

Declinatio Aufrina 19 2

Resp. Longitudo 29° 26⁵/₈' ♑.

Latitudo 1 19²/₃ B.

Octava nebulosa.

Præcedens in fronte ♑.

Afc. R. a 10^{ma} in manu Oph. 298° 54'

Viceversa a luc. cauda ♑ 299 10¹/₂

Declinatio Aufrina 20 26

Afcensio recta media 299 2

Nona nebulosa.

In superiori parte colli ♑.

Afc. R. a penultima in cauda

Serpentis 304° 7¹/₂'

Viceversa a cauda ♑ 304 7 27''

Ergo Afcensio recta 304 7¹/₂

Declinatio Aufrina 16 18¹/₄

Resp. Longitudo 2 38⁵/₆' ☿

Latitudo 3 24⁵/₆ B.

Decima magnitud. 6^{tae} minor.

Quæ est in inferiori parte colli ♑.

Afc. R. a penult. caud. Serp. 304° 9' 38''

Viceversa a luc.

caudæ ♑ 304 5 35

Afcensio R. limitata 304 7 36

Declinatio Aufrina 19 32³/₄

Resp. Longitudo 1° 55¹/₂' ☿

Latitudo 0 15¹/₄ B.

¹ Postea in margine adscripta. Long. 28° 40¹/₂' ♑, lat. 6° 52³/₈ B. (quæ etiam in catalogo stellarum reperiuntur) lineis inducæ sunt. Declinatio, quæ die 1 Aug. 1589 observata est, falsa est; debet esse 13° 58¹/₂'.

² Adscriptum est in margine: »Hæc Afc. R. est melior altera, quæ adhuc 1 Min. maior iusto est«.

³ In catalogo sunt (ad annum 1589 reducæ) long. 26° 58' ♑, lat. 7° 16' B. Distantia hujus stellæ d. 13 Aug. 1590 a dextra manu Ophiuchi observata est 32° 46', d. 22 Sept. 1590 a lucida caudæ ♑ 22° 59¹/₄'. In hac errorem subesse oportet, cum afc. rect. (a. 1590) det 297° 35', qua Tycho usus est. Prior autem dat 297° 20', unde long. 26° 42¹/₂', lat. 7° 18¹/₂ B. (1589).

⁴ Debit esse 19° 29', error 10' (d. 13. Aug. 1590). Afc. recta 300° 51' non multum a vera abest.

Vndecima obscura.

Quæ præcedit in dextro genu.

Asc. R. ab orient. cap. \times 305° 37'

Viceversa a prima alæ

Peg. 305 34½

Ascens. R. limitata 305 35 45

Declinatio Austrina 26 39

Resp. Longitudo 1° 36¾' \approx 1.

Latitudo 6 58½ M.

Duodecima obscura.

Quæ sequitur in genu sinistro.

Asc. R. ab orient. cap. \times 306° 32'Declinatio Austrina² 28 30Viceversa a 18^{va} \approx 306 54N.B. Hæc melior est, nam bis ab hac stella \approx in distantia observata est.Decima tertia magnit. 6^{tæ} minor.

In sinistro armo.

Ascensio Recta 310° 41' 0''

Viceversa a 18^a \approx 310 40 30

Ascensio R. limitata 310 40¾

Declinatio Austrina 26 41

Resp. Longitudo 6° 2¾' \approx

Latitudo 8 7½ M.

Decima quarta magn. 5^{tæ}.

Infima in ventre.

Asc. R. a Marchab 315° 49'

Viceversa 315 47 5''

Ascensio recta media 315 48

Declinatio Austrina 24 7

Resp. Longitudo 11° 14½' \approx

Latitudo 6 56½ M.

Decima quinta mag. 6^{tæ}.

Sequens borealis duarum contiguarum sub aluo.

Asc. R. a 1 alæ Peg. 316° 20½'

Viceversa ab inf. cornu \approx 316 12 50''

Ascens. R. emendata 316 16¾

Declinatio aust. 23 31

Decima sexta magn.... minor³.

Trium in medio ventre orientalior.

Asc. R. ab infer. cornu \approx 312° 55' 30''

Declinatio Aust. 22 16½

Decima septima mag. 6^{tæ} minor.

Infima trium ad occalum.

Asc. R. ab infer. cornu \approx 310° 50' 24''Viceversa a 18^{va} \approx 311 10½

Declinatio Austrina 22 47½

Ascens. R. pone 311 0⁴Decima octava mag. 5^{tæ}.

Septentrionalis earum trium quæ in medio corpore sunt.

Asc. R. a 1 alæ Peg. 310° 23'

Viceversa a 18^{va} \approx 310 21

Ascens. R. limitata 310 22

Declinatio Austrina 21 28

Resp. Longitudo 7° 8' \approx

Latitudo 3 1½ M.

Decima nona mag. 5^{tæ}.

Duarum in dorso anterior.

Asc. R. a 1^a alæ Peg. 310° 44¾'Viceversa ab inf. cornu \approx 310 44 3

Ascens. R. emendata 310 44½

Declinatio Austrina 18 45¾

Vicesima mag. 5^{tæ}.

Sequens earundem in dorso.

Asc. R. a Marchab 314° 48'

Viceversa ab inf. cornu \approx 314 46 45

Ascens. R. limitata 314 47 20

Declinatio Austr. (bona) 18 29

Resp. Longitudo 11° 57½' \approx

Latitudo 1 16½ Merid.

Vicesima prima mag. 5^{tæ} maior. Antecedens duarum ad ilia seu flexuram.

Asc. R. a prima alæ Peg. 318° 31¼'

ab infer. cornu \approx 318 31½

Ascensio R. limitata 318 31½

Declinatio Austrina vera⁵ 21 14¾¹ Et si duæ ascensiones rectæ bene concordant, tamen longitudo 10' maior vera est ob neglectam refractionis correctionem.² Hæc declinatio 7' maior vera est. Die 15 Augusti 1589 observata est — 28° 22' 3 (recte); refractionis correctionem bis intulisse videtur. Quod stellam »obscuram« vocat, et si vera magnitudo 4½ est, eam Horizonti tam vicinam debilibissimam fuisse ostendit.³ Catalogus habet mag. 6.⁴ Hæc Tycho usus est, et longitudo sic reperta circiter 13' minor vera est. Si vero 311° 10½ utimur, long. reperimus 7° 30½' \approx (1589), lat. 4° 29' A. quæ a veritate non multum abfunt.⁵ Long. et lat., et si in codice lineis inductæ sunt, tamen in catalogo sine ulla correctione insertæ sunt. Debent esse (pro a. 1589) Long. 14° 30½', Lat. 4° 55½' A.

Vicesima secunda mag. 5^{tæ}. Sequens.

Asc. R. a prima alæ Peg. 319° 56'

Viceversa ab inf.

cornu ζ 319 50

Ascensio R. limitata 319 53

Declinatio Austrina 20 42

Resp. Longitudo 15° 55 $\frac{3}{4}$ '''

Latitudo 4 49 M.

Vicesima tertia mag. 4^{tæ}.Duarum lucidiorum in educatione
caudæ præcedens.Asc. R. a 1^{ma} alæ 319° 18'Declinatio Austr. 18 23 $\frac{2}{3}$ Huius Ascensio recta ad annum 85
completum fuit 319 15 $\frac{1}{2}$, ergo reducta
ad finem anni 88 fit Ascensio R. 319° 18'.Vicesima quarta mag. 4^{tæ} mai.Sequens earundem, quæ est lucida in
cauda ζ.Ascensio recta 321° 5 $\frac{1}{2}$ ' limitata & ad
initium 89 reducta.

Declinatio Auftr. 17 54.

Vicesima quinta mag. 6^{tæ}.

Antecedens in cauda.

Asc. R. a superiori cornu 319° 46' 0''

Declinatio A. 13 13¹Vicesima sexta mag. 5^{tæ}.Reliquarum quatuor in cauda Au-
stralis.Asc. R. a superiori cornu ζ 322° 57 $\frac{3}{4}$ 'Viceversa 322 58 $\frac{1}{2}$

Ascensio R. limitata 322 58 0''

Declinatio Austrina 15 34²Resp. Longitudo 20° 16 $\frac{3}{4}$ '''Latitudo 0 14 $\frac{1}{2}$ M.Vicesima septima mag. 6^{tæ} minor.Quæ supra 26^{tam}.Asc. R. a super. cornu ζ 322° 42 $\frac{1}{4}$ 'Viceversa a 2^{da})(322 43 $\frac{1}{2}$

Ascensio R. limitata 322 43

Declinatio Auftr. 15 25

Resp. Longitudo 20° 5 $\frac{5}{6}$ '''Latitudo 0 10 $\frac{1}{2}$ M.³Vicesima octava mag. 6^{tæ}.

Extrema in cauda.

Asc. R. a 2^{da})(Auftr. 320° 47' 15''

Viceversa a super.

cornu ζ 320 46 25

Ascensio R. emendata 320 46 $\frac{2}{3}$ Declinatio Auftr. 10 52 $\frac{1}{2}$ Resp. Longitudo 19° 43 $\frac{5}{6}$ '''Latitudo 4 17 $\frac{1}{2}$ B.

AQUARIJ ♒.

1^a In capite ♒ mag. 6^{tæ}.

Asc. R. a dext. hum. 319° 41' 45''

Viceversa a Vulture 319 41 5

Ascensio recta verific. 319 41 $\frac{1}{2}$

Declinatio borea 0 27

Resp. Longitudo 22° 16 $\frac{1}{2}$ '''

Latitudo 15 23 B.

2^{da} In humero dextro quæ clarior,
mag. 3^æ min.Asc. R. a sup^{ri} cornu ζ 326° 9' 43''

Viceversa a Vulture 326 10 32

Ascensio R. emend. 326 10 0

Declinatio Auftr. 2 16 0

Resp. Longitudo 27° 39 $\frac{1}{6}$ '''

Latitudo 10 42 B.

3^a mag. 5^{tæ}. Quæ obscurior et australi-
lior.

Asc. R. ab infer. cornu ζ 325° 32' 27''

ab ext. alæ Peg. 325 30 12

ab 8^{va} ♒ 325 33 4

Ascensio R. emendata 325 32

Declinatio merid. 4 5 $\frac{1}{2}$ Resp. Longitudo 26° 25 $\frac{1}{2}$ '''Latitudo 9 11 $\frac{1}{2}$ B.

¹ Codex præbet long. 19° 18 $\frac{5}{6}$ ''' lat. 1° 57 $\frac{1}{2}$ ' B., sed hæc lineis inductæ sunt. Qua ascensione recta usus hunc locum, qui prorsus verus est, Tycho repererit, invenire non potuimus. Locus in catalogo datus repertus est ex asc. rect. 319° 46'.

² Debet esse circiter 15° 24'. Die 30 Oct. 1589 decl. 15° 32' observata est.

³ Hic locus falsus est, cum nulla stella in hoc loco sit. Forsitán stella B. D. — 13°. 6027 = P. XXI. 291 observata sit, cujus tamen declinatio anno 1589 erat circiter 14° 36'.

4^a mag. 3^æ. Quæ in humero finistro.

| | |
|-----------------------------------|----------------------|
| Afc. R. a Vulture | 317° 28' 43'' |
| Ex obseruat. A ⁱ 86 | 317 27 35 |
| Afcensio R. emendata | 317 28 $\frac{1}{8}$ |
| Declinatio Auftr. | 7 19 |
| Resp. Longitudo 17° 41' \approx | |
| Latitudo | 8 40 B. |

5 mag. 5^æ. Quæ inde in dorso tanquam sub axilla.

| | |
|--|------------------------|
| Afc. R. ab infer. cornu ζ | 319° 0' 52'' |
| ab ext. alæ Peg. | 318 57 31 |
| ab 8 ^{va} \approx | 319 1 0 |
| Afcensio R. emendata | 319 1 0 |
| Declinatio Merid. | 9 37 $\frac{1}{2}$ |
| Resp. Longitudo 18° 27 $\frac{1}{2}$ ' \approx | |
| Latitudo | 6 0 $\frac{1}{3}$ Bor. |

6^{ta} mag. 6^{ta} maior.

In sinistra manu.

| | |
|--|---------------------|
| Afc. R. ab 8 ^{va} \approx | 311° 47' 22'' |
| ab infer. cornu ζ | 311 48 12 |
| ab ext. alæ Peg. | 311 50 15 |
| Afc. R. media & emend. | 311 48 |
| Declinatio Merid. | 12 57 $\frac{1}{3}$ |
| Resp. Longitudo 10° 41 $\frac{1}{3}$ ' \approx | |
| Latitudo | 4 50 Bor. |

7^a mag. 6^{ta} maior.

Media trium in sinistra manu.

| | |
|---|-------------------------|
| Afc. R. a fin. hum. \approx | 307° 32' 55'' |
| Viceversa ab extr. alæ | 307 35 43 |
| Afcensio R. verificata | 307 34 |
| Declinatio Merid. | 10 27 |
| Resp. Longitudo 7° 18 $\frac{1}{4}$ ' \approx | |
| Latitudo | 8 19 $\frac{1}{2}$ Bor. |

8^{va} Lucidior seu superior trium in sinistra manu.

| | |
|--|----------------------|
| Afc. R. a dext. humero | 306° 22' 49'' |
| Viceversa a Vulture | 306 20 13 |
| Afcensio R. emend. | 306 21 $\frac{1}{2}$ |
| Declinatio Austrina | 10 54 $\frac{1}{2}$ |
| Resp. Longitudo 6° 1 $\frac{3}{8}$ ' \approx | |
| Latitudo | 8 9 $\frac{3}{4}$ B. |

9^{na} In cubito dextro mag. 3^æ.

| | |
|--|-----------------------|
| Afc. recta a Vulture | 330° 6' 28'' |
| Viceversa ab ext. alæ | 330 7 43 |
| Afc. R. verificata | 330 7 |
| Declinatio Auftr. | 3 23 $\frac{1}{2}$ |
| Resp. Longitudo 0° 59 $\frac{1}{4}$ ' χ | |
| Latitudo | 8 17 $\frac{1}{2}$ B. |

10^a in dextra manu quæ borea, mag. 4^{ta} min.

| | |
|--|------------------------|
| Afc. R. ab extr. alæ Peg. | 331° 5' 15'' |
| Viceversa a Vulture | 331 4 36 |
| Afcensio recta emend. | 331 5 0 |
| Declinatio Auftr. | 0 39 0 |
| Resp. Longitudo 2° 54 $\frac{1}{2}$ ' χ | |
| Latitudo | 10 30 $\frac{5}{8}$ B. |

11^a mag. 3^æ. Reliquarum duarum australium præcedens.

| | |
|-------------------------------|-----------------------|
| Afc. recta ab extr. alæ | 332° 1' 41'' |
| Viceversa a Vulture | 331 54 55 |
| Afcensio R. mediata | 331 57 |
| Declinatio auftr. | 2 4 $\frac{2}{3}$ |
| Resp. Longitudo 3° 13' χ | |
| Latitudo | 8 52 $\frac{1}{3}$ B. |

12^a mag. 3^æ. Quæ sequitur.

| | |
|--|-----------------------|
| Afc. recta ab ext. alæ | 333° 36' 18'' |
| Viceversa a Vulture | 333 34 15 |
| Afcensio recta emend. | 333 35 15 |
| Declinatio Austrina | 2 12 0 |
| Resp. Longitudo 4° 42 $\frac{5}{8}$ ' χ | |
| Latitudo | 8 10 $\frac{1}{4}$ B. |

13^a mag. 5^{ta} maior. In cotyla dextra duarum præcedens.

| | |
|--------------------------------------|-------------------------|
| Afc. R. ab 8 ^{va} \approx | 328° 50' 32'' |
| ab infer. cornu ζ | 328 47 49 |
| ab ext. alæ Peg. | 328 45 45 |
| Afcensio R. media | 328 48 40 |
| Declinatio Merid. | 9 45 15 |
| Resp. Longitudo 27° 35' \approx | |
| Latitudo | 2 45 $\frac{5}{8}$ Bor. |

14^a mag. 6^{ta}. Sequens.

| | |
|--|-----------------------|
| Afcensio R. ab 8 ^{va} | 329° 37' 43'' |
| Ponatur eius Afc. R. | 329 38 |
| Declinatio Merid. | 9 45 |
| Resp. Longitudo 28° 20 $\frac{3}{4}$ ' \approx | |
| Latitudo | 2 29 $\frac{1}{2}$ B. |

15 mag. 5^{ta} min.

In dextro fæmore.

| | |
|--|----------------------|
| Afc. R. ab 8 ^{va} \approx | 332° 15' 11'' |
| Viceversa ab hum. fin. \approx | 332 13 55 |
| Afcensio R. emend. | 332 14 $\frac{1}{2}$ |
| Declinatio auftr. | 12 42 |
| Resp. Longitudo 29° 42 $\frac{3}{8}$ ' \approx | |
| Latitudo | 1 10 Auftr. |

16^{ta} mag. 4^{ta} minor.

Quæ est ad clunes.

| | |
|--|---------------------|
| Afc. R. ab 8 ^{va} ♀ | 326° 4' 41'' |
| ab infer. cornu ζ | 326 4 5 |
| Afcensio R. emend. | 326 4 $\frac{1}{3}$ |
| Declinatio Merid. | 15 46 $\frac{1}{3}$ |
| Resp. Longitudo 23° 25 $\frac{5}{6}$ ' ♀ | |
| Latitudo 2 0 $\frac{1}{4}$ Merid. | |

17^a non est obseruabilis.

18^{va} mag. 3^a minor.

Australis in dextra tibia.

| | |
|---|------------------------|
| Afc. R. ab 8 ^{va} ♀ | 338° 11' 39'' |
| ab infer. cornu ζ | 338 16 22 ² |
| ab ext. alæ Peg. | 338 14 22 |
| Afcensio R. emend. | 338 14 $\frac{1}{2}$ |
| Declinatio Merid. | 17 57 $\frac{1}{3}$ |
| Resp. Longitudo 3° 11 $\frac{5}{6}$ ' X | |
| Latitudo 8 10 Merid. | |

19^a mag. 5^{ta}.

Borea seu in genu dextro.

| | |
|----------------------------------|----------------------|
| Afc. R. ab 8 ^{va} ♀ | 336° 58' 51'' |
| ab extr. ala Peg. | 336 58 55 |
| ab infer. cornu ζ | 336 56 50 |
| Afcensio R. emendata | 336 58 $\frac{1}{2}$ |
| Declinatio Merid. | 15 42 |
| Resp. Longitudo 2° 55' X | |
| Latitudo 5 37 $\frac{1}{2}$ Auf. | |

21^a 5^{ta} mag. Duarum australior in sinistra tibia.

| | |
|--|-------------------------|
| Afcensio ab inferiori cornu ζ et Lucida | |
| caudæ Ceti limitata | 332° 58 $\frac{1}{2}$ ' |
| Declinatio Auf. | 22 45 $\frac{1}{3}$ |
| Resp. Longitudo 26° 45 $\frac{1}{3}$ ' ♀ | |
| Latitudo 10 48 $\frac{1}{3}$ M. | |

23^{ia} magnitud. 6^{ta} maior. Prima seu suprema in effusione aquæ.

| | |
|----------------------------|------------------------|
| Afc. R. a Lucida in nodo X | 334° 6 $\frac{1}{2}$ ' |
| Viceversa a dext. | |
| hum. ♀ | 334 6 |
| Afcensio R. limitata | 334 6 $\frac{1}{4}$ |
| Declinatio Auf. | 6 19 $\frac{2}{3}$ |

24^{ta} mag. 4^{ta} min. Sequens lucidior in profusione aquæ.

| | |
|---|----------------------|
| Afc. R. ab 8 ^{va} ♀ | 337° 47' 45'' |
| Viceversa a fin. hum. ♀ | 337 49 30 |
| Afcensio R. emendata | 337 48 $\frac{2}{3}$ |
| Declinatio Merid. | 9 41 |
| Resp. Longitudo 5° 53 $\frac{5}{6}$ ' X | |
| Latitudo 0 19 $\frac{2}{3}$ Auf. | |

25

non respondet
in declinatione ambi-
gitur³

26 mag. 5^{ta}. Sequens in primo flexu aquæ effusionis.

| | |
|--|----------------------|
| Afc. recta a lucida | |
| in connexu lini X | 343° 15' 12'' |
| Viceversa | 343 17 44 |
| Afcensio R. emendata | 343 16 $\frac{1}{2}$ |
| Declinatio Austrina | 8 12 $\frac{2}{3}$ |
| Resp. Longitudo 11° 27 $\frac{2}{3}$ ' X | |
| Latitudo 0 59 $\frac{2}{3}$ M. | |

27 mag. 6^{ta} maior.

In altero flexu australi.

| | |
|--|-------------------------|
| Afc. R. a luc. in nodo X | 343° 55 $\frac{5}{6}$ ' |
| Viceversa | 343 54 |
| Afcensio R. emendata | 343 55 0 |
| Declinatio Auf. | 9 55 0 |
| Resp. Longitudo 11° 22 $\frac{5}{6}$ ' X | |
| Latitudo 2 48 $\frac{5}{6}$ M. | |

28^{va} mag. 5^{ta} min. Præcedens et borealior duarum sequentium in flexu aquæ.

| | |
|--|---------------------|
| Afc. R. a luc. in nodo lini X | 343° 34' 30'' |
| Viceversa | 343 35 30 |
| Afcensio R. emendata | 343 35 |
| Declinatio Austrina | 11 18 $\frac{1}{2}$ |
| Resp. Longitudo 10° 32 $\frac{3}{5}$ ' X | |
| Latitudo 3 58 $\frac{1}{5}$ M. | |

29^a magnitudinis 5^{ta} min.

Sequens australior.

| | |
|--------------------------|------------------------|
| Afc. R. a luc. in nodo X | 344° 5 $\frac{1}{6}$ ' |
| Viceversa | 344 7 $\frac{5}{6}$ |

¹ Adscriptum est in margine: »Optima, quod postea in obseruationibus ♂ compertus sum«.

² Adscriptum est: »Optima«.

³ In margine litteris exiguis scripta. In cod. G inueniuntur ex obseruatione d. 20 Nov. 1589 facta afc. recta 340° 59', declinatio — 9° 35'. Quia hæc decl. 18' minor vera est, latitudo minor vera est 16'.

Afcensio R. emendata 344 6 20
 Declinatio Auftrina 11 19
 Resp. Longitudo $11^{\circ} 0\frac{1}{4}'$ χ
 Latitudo 4 $10\frac{3}{8}$ M.

30^a magnitudinis 5^{tæ}.

Sequens & ad austrum declinans.

Afc. R. a luc. in nodo χ 344° 22' 3"
 Viceversa 344 23 $\frac{1}{2}$

Afcensio recta emendata

pro refractione 344 22 $\frac{3}{8}$

Declinatio Auftrina 11 48 $\frac{1}{8}$

Resp. Longitudo $11^{\circ} 4\frac{1}{4}'$ χ
 Latitudo 4 $43\frac{1}{8}$ M.

31^{ma} magnitudinis 5^{tæ}.

Post 30^{am} duarum contiguarum præcedens.

Afc. recta a luc. nodo χ 349° 35'
 Viceversa 349 39 $\frac{1}{8}$

Afcensio R. emendata 349 37

Declinatio Auftrina 16 26

Resp. Longitudo $13^{\circ} 56\frac{5}{8}'$ χ
 Latitudo 10 $58\frac{5}{8}$ M.

32^{da} magnitudinis 5^{tæ}.

Sequens duarum contiguarum.

Afc. R. a luc. in nodo χ 350° 20 49"
 Viceversa 350 19 22

Afcensio R. emendata 350 20

Declinatio Auftrina 16 45

Resp. Longitudo $14^{\circ} 28'$ χ
 Latitudo 11 $32\frac{3}{8}$ M.

33^{ta} magnitudinis 5^{tæ} min.

In tertio aquæ fluxu borea trium.

Afc. R. a luc. cauda ζ 350° $4\frac{2}{3}'$
 Viceversa a luc.

cauda Ceti 350 $6\frac{1}{8}$

Emendata pro refractione 350 $5\frac{1}{8}$

Declinatio Auftrina 20 4

Resp. Longitudo $12^{\circ} 52\frac{1}{2}'$ χ
 Latitudo 14 $29\frac{1}{2}$ M.

34^{ta} magnitudinis 6^{tæ}.

Media in tertio aquæ fluxu.

Afc. R. a luc. cauda ζ 351° $5\frac{1}{4}'$
 Viceversa 351 $8\frac{5}{8}$

Afcensio R. emendata 351 7

Declinatio Auftrina 20 30

Resp. Longitudo $13^{\circ} 36\frac{1}{8}'$ χ
 Latitudo 15 $16\frac{1}{2}$ M.

35^{ta} magnitudinis 6^{tæ} min.

Sequens trium & australis.

Afc. R. a luc. cauda ζ 352° 31' 4"
 Viceversa 352 30

Afcensio R. limitata 352 $30\frac{1}{2}$

Declinatio Auftrina 21 8

Resp. Longitudo $14^{\circ} 34'$ χ
 Latitudo 16 $23\frac{1}{12}$ M.

36^{ta} magnitudinis 5^{tæ}.

Sequentium trium borealis.

Afc. R. a luc. cauda ζ 345° 21' 7"
 Viceversa 345 17 26

Afcensio recta pro

refractione emendata 345 19 $\frac{1}{4}$

Declinatio Auftrina 22 19

Resp. Longitudo $7^{\circ} 44\frac{1}{8}'$ χ
 Latitudo 14 $45\frac{1}{4}$ M.

37^{ma} magnitudinis 5^{tæ}.

Media trium earundem.

Afc. R. a luc. cauda ζ 346° 5' 29"
 Viceversa 346 $1\frac{3}{4}$

Afcensio R. limitata 346 $3\frac{2}{8}$

Declinatio Auftrina 22 $49\frac{1}{2}$

Resp. Longitudo $8^{\circ} 10\frac{1}{2}'$ χ
 Latitudo 15 $29\frac{3}{8}$ M.

38^{va} magnitudinis 5^{tæ} min.

Australior trium.

Afc. R. a cauda ζ luc. 347° $56\frac{1}{2}'$
 Viceversa 347 55

Afcensio R. emendata 347 $55\frac{2}{8}$

Declinatio Auftrina 23 $10\frac{3}{4}$

Resp. Longitudo $9^{\circ} 39\frac{1}{2}'$ χ
 Latitudo 16 $30\frac{5}{8}$ M.

39^{na} magnit. 5^{tæ}.

In vltima flexura trium superior.

Afc. R. a luc. caudæ ζ 341° 48' 47"
 Viceversa 341 49 26

Afcensio R. media 341 $49\frac{1}{8}$

Declinatio Auftrina 23 21

Resp. Longitudo $4^{\circ} 14' 54''$ χ
 Latitudo 14 $25\frac{3}{8}$ M.

40^a magnitudinis 5^{tæ}. Media.

Afc. R. a luc. in cauda ζ 341° $58\frac{1}{4}'$
 Viceversa a luc.

cauda Ceti 341 58

| | |
|---|-----------------------|
| Afcensio R. mediata | 341 58 $\frac{1}{12}$ |
| Declinatio Aufrina | 24 38 |
| Resp. Longitudo 3° 51 $\frac{1}{2}$ ' χ | |
| Latitudo 15 39 $\frac{5}{8}$ M. | |
| 41 ^a magnitudinis 5 ^{tæ} . | |
| Trium infima proximaque Foma- | |
| hant. | |
| Afc. R. a luc. in cauda Capr. 341° 21 $\frac{1}{3}$ ' | |
| Viceversa a refractione | |
| liberata 341 18 $\frac{5}{8}$ | |
| Afcensio R. media | 341 20 |

| | |
|---|---------------|
| Declinatio Aufrina ¹ | 25 7 |
| Resp. Longitudo 3° 6 $\frac{1}{2}$ ' χ | |
| Latitudo 15 52 $\frac{3}{4}$ M. | |
| 42 ^{da} mag. 1 ^æ . Vltima effusionis aquæ | |
| quæ Fomahant dicitur. | |
| Afc. R. a 23 ^{ia} ζ | 338° 34' 10'' |
| ab inferi. cornu ζ | 338 36 9 |
| Afcensio R. emendata | 338 35 |
| Declinatio Aufrina | 31 43 |
| Resp. Longitudo 28° 11 $\frac{1}{4}$ ' \approx | |
| Latitudo 20 59 $\frac{1}{4}$ Auf. | |

PISCIUM χ .

| | |
|--|----------------------|
| 1 ^a auftralis piscis in ore, mag. 5 ^{tæ} . | |
| Afc. recta a luc. \vee | 340° 44' 26'' |
| Viceversa a Vulture | 340 44 48 |
| Afcensio R. emendata | 340 44 $\frac{3}{8}$ |
| Declinatio borea | 1 37 $\frac{2}{8}$ |
| Resp. Longitudo 12° 52' χ | |
| Latitudo 9 4 B. | |

| | |
|--|----------------------|
| 2 ^a Duarum in occipite auf., mag. 5 ^{tæ} . | |
| Afc. recta a luc. \vee | 344° 0' 29'' |
| Viceversa | 343 58 31 |
| Afcensio R. emendata | 343 59 $\frac{1}{2}$ |
| Declinatio Bor. | 1 2 $\frac{3}{4}$ |
| Resp. Longitudo 15° 40 $\frac{1}{4}$ ' χ | |
| Latitudo 7 17 $\frac{3}{8}$ B. | |

| | |
|--|--------------|
| 3 ^{ia} in occipite borea mag. 6 ^{tæ} . | |
| Afc. recta a luc. \vee | 344° 51' 5'' |
| Viceversa | 344 54 42 |
| Afcensio R. emendata | 344 53 |
| Declinatio borea | 3 11 |
| Resp. Longitudo 17° 20 $\frac{1}{2}$ ' χ | |
| Latitudo 8 54 $\frac{1}{2}$ B. | |

| | |
|---|---------------|
| 4 ^{ta} In dorso duarum quæ præit, mag. 5 ^{tæ} . | |
| Afc. recta a luc. \vee | 346° 49' 48'' |
| Viceversa a Vulture | 346 47 15 |
| Ex obseruat. A ⁱ 87 | 346 49 2 |
| Afcensio R. media | 346 49 |
| Declinatio Borea | 4 10 |
| Resp. Longitudo 19° 31 $\frac{3}{4}$ ' χ | |
| Latitudo 9 3 $\frac{1}{4}$ B. | |

| | |
|---|----------------------|
| 5 ^{ta} in dorso quæ sequitur, mag. 5 ^{tæ} . | |
| Afc. R. a luc. \vee | 349° 44' 34'' |
| Viceversa a Vulture | 349 44 46 |
| Afcensio R. vera | 349 44 $\frac{3}{8}$ |
| Declinatio Borea | 3 26 |
| Resp. Longitudo 21° 46 $\frac{1}{3}$ ' χ ² | |
| Latitudo 7 13 $\frac{2}{8}$ B. | |

| | |
|--|----------------------|
| 6 ^{ta} præcedens in aluo, mag. 5 ^{tæ} min. | |
| Afc. R. a luc. \vee | 346° 27' 30'' |
| Viceversa | 346 32 1 |
| Ex obf. A ⁱ 86 a luc. \vee | 346 28 25 |
| Afcensio R. media | 346 28 $\frac{1}{2}$ |
| Declinatio Auftr. | 0 58 |
| Resp. Longitudo 17° 11' χ | |
| Latitudo 4 27 B. | |

| | |
|---|---------------|
| 7 ^a Sequens in aluo mag. 5 ^{tæ} . | |
| Afc. R. a luc. \vee | 350° 17' 52'' |
| Viceversa | 350 19 35 |
| Afcensio R. emendata | 350 18 40 |
| Declinatio Auftr. | 0 28 30 |
| Resp. Longitudo 20° 55' χ | |
| Latitudo 3 24 $\frac{3}{8}$ Bor. | |

| | |
|---|----------------------|
| 8 ^{va} in cauda χ ^{is} auftralis, mag. 5 ^{tæ} . | |
| Afc. R. a lucid. \vee | 354° 34' 6'' |
| Viceversa | 354 34 52 |
| Afcensio R. emendata | 354 34 $\frac{1}{2}$ |
| Declinatio borea | 4 36 $\frac{3}{4}$ |
| Resp. Longitudo 26° 52' χ | |
| Latitudo 6 23 $\frac{1}{2}$ B. | |

¹ Hæc declinatio 50' minor quam vera est. Observata est die 16. Nov. 1589.

² Debet esse 21° 56 $\frac{1}{2}$ '. Error calculi.

9^a In lino ad caudam Australis χ , obscura¹.

Afc. R. a lucida \vee 355° 29'
 Viceversa ab ore Peg. 355 24
 Ascensio R. media 355 26 $\frac{1}{2}$
 Declinatio borea 6 8 $\frac{1}{2}$
 Resp. Longitudo 28° 16 $\frac{5}{8}$ ' χ
 Latitudo 7 26 $\frac{5}{8}$ B.

10^a

Vix obferuabilis²

11^a In lino australi lucidarum trium præcedens, mag. 5^{tæ}.

Afc. R. ab intersect. γ 3^{ia} 6° 50' 9"
 Viceversa a 1^a alæ Peg 6 55 1"
 Ascensio R. media 6 52 $\frac{2}{3}$
 Declinatio borea 5 21 $\frac{1}{2}$
 Resp. Longitudo 8° 26' \vee
 Latitudo 2 11 B.

12^a Earundem media mag. 5.

Afc. R. a 3^{ia} intersect. γ 10° 22' 27"
 Viceversa a 1^a alæ Peg. 10 28 22"
 Ascensio recta media 10 25
 Declinatio Borea 5 41
 Resp. Longitudo 11° 47 $\frac{5}{6}$ ' \vee
 Latitudo 1 5 $\frac{1}{2}$ B.

13^a trium sequens mag. 5^{tæ}.

Ascensio R. 13° 4' 56"
 Viceversa 13 7 33
 Ascensio R. media 13 6
 Declinatio Borea 5 24 $\frac{3}{4}$
 Resp. Longitudo 14° 9' \vee
 Latitudo 0 57 $\frac{1}{2}$ B.³

14^a magn. 6^{tæ} minor. In flexu lini duarum exiguarum antecedens ac borealior.

Afc. recta a 2^{da} χ Aufr. 11° 53 $\frac{1}{6}$
 Viceversa ab Aldeb. 11 49 30"
 Ascensio R. emendata 11 51 $\frac{1}{2}$
 Declinatio Borea 3 27 $\frac{1}{2}$
 Resp. Longitudo 12° 14 $\frac{5}{8}$ ' \vee
 Latitudo 1 31 M.

15^a magn. 6^{tæ} minor. Sequens duarum exiguarum & australior.

Afc. R. a 2^{da} χ auftr. 14° 11' 50"
 Viceversa ab Aldebora 14 11 40
 Ascensio recta media 14 11 $\frac{3}{4}$
 Declinatio Borea 1 24
 Resp. Longitudo 13° 36' \vee
 Latitudo 4 19 24⁴

16^a Post inflexionem trium præcedens, mag. 5^{tæ} min.

Afc. recta a 1^a alæ Peg. 17° 13'
 Viceversa 17 10
 Ascensio recta media 17 11 $\frac{1}{2}$
 Declinatio Borea 4 1 $\frac{2}{3}$
 Resp. Longitudo 17° 22 $\frac{5}{8}$ ' \vee
 Latitudo 3 3 M.

17^a Media, magnitudinis 5^{tæ}.

Afc. R. a 3^{ia} intersect. γ 19° 59' 8"
 Viceversa a 1^a alæ Peg. 20 3 16
 Ascensio R. mediata 20 1
 Declinatio borea 3 25 $\frac{1}{2}$
 Resp. Longitudo 19° 46 $\frac{1}{2}$ ' \vee
 Latitudo 4 40 $\frac{1}{2}$ A.

18^a Sequens et vltima mag. 5^{tæ}.

Afc. R. a 3^{ia} intersect. γ 23° 3' 27"
 Viceversa a prima alæ 23 8 41
 Ascensio R. mediata 23 6
 Declinatio borea 1 9
 Resp. Longitudo 21° 47 $\frac{1}{6}$ ' \vee
 Latitudo 7 56 $\frac{1}{6}$ A.

19^a Quæ lucidior in nexu amborum linorum, mag. 4^{tæ}.

Afc. R. a 3^a γ 25° 12' 46"
 Viceversa a 1^a alæ 25 12 24
 Ascensio R. emendata 25 12 $\frac{1}{2}$
 Declinatio borea 0 45 $\frac{1}{2}$
 Resp. Longitudo 23° 37 $\frac{1}{2}$ ' \vee
 Latitudo 9 4 $\frac{2}{3}$ M.

20^a mag. 5^{tæ} min.

In lino boreo a connexu præcedens.
 Afc. R. ab Aldebora 20° 58' 57"
 Viceversa a 1^{ma} alæ 20 58 57

¹ In margine adscriptum est »Obscura admodum«.

² In margine litteris exiguis adscriptum. Locus stellæ in *Progymnasmatibus* reperitur (mag. 6).

³ Latitudo debet esse 0° 12 $\frac{1}{2}$ ' Aufr. Error calculi.

⁴ Sic in codice: 19 $\frac{4}{5}$ 24". Catalogus habet 19 $\frac{1}{2}$ '.

Afcensio R. vera 20 58 $\frac{3}{5}$
 Declinatio borea 7 5
 Resp. Longitudo 22° 1 $\frac{2}{3}$ ' ∇
 Latitudo 1 38 $\frac{1}{2}$ B.¹

21^a mag. 4^{tæ} min.
 Post hanc trium australis.
 Afc. R. ab Aldeb. 18° 52' 34"
 Viceversa 18 51 32
 Afcensio R. emendata 18 52
 Declinatio Borea 10 1
 Resp. Longitudo 21° 5 $\frac{3}{4}$ ' ∇
 Latitudo 1 51 $\frac{3}{5}$ Bor.

22^{da} mag. 4^{tæ} min.
 Media et lucidior in nexu boreo.
 Afc. R. ab Aldeb. 17° 24' 14"
 Viceversa a 1^a alæ 17 26 30
 Afcensio R. emendata 17 25 $\frac{1}{5}$
 Declinatio borea 13 12 $\frac{2}{5}$
 Resp. Longitudo 21° 5 $\frac{5}{6}$ ' ∇
 Latitudo 5 21 $\frac{1}{4}$ Bor.

23^{ia} mag. 5^{tæ}.
 Borea trium et vltima in lino.
 Afc. R. ab Aldeb. 16° 5' 44"
 Viceversa a 1^{ma} alæ 16 9 7
 Afcensio R. media 16 7 $\frac{1}{2}$
 Declinatio borea 17 4 $\frac{1}{2}$
 Resp. Longitudo 21° 26 $\frac{1}{6}$ ' ∇
 Latitudo 9 24 Bor.

24^{ta} mag. 6^{tæ}.
 Duarum in ore χ borealis borea.
 Afc. R. ab Aldeb. 12° 8' 35"
 Viceversa a 1^a alæ Peg. 12 13 8
 Afcensio R. media 12 10
 Declinatio borea 29 14
 Resp. Longitudo 23° 4 $\frac{2}{3}$ ' ∇
 Latitudo 21 59 $\frac{1}{2}$ Bor.

25^{ta} mag. 5^{tæ}.
 Australis in ore χ eiusdem borei.
 Afc. R. ab Aldeb. 12° 21' 25"
 Viceversa a 1^a alæ 12 22 15
 Afcensio R. emendata 12 22

Declinatio borea 27 54 $\frac{3}{4}$
 Resp. Longitudo 22° 39 $\frac{1}{4}$ ' ∇
 Latitudo 20 43 $\frac{1}{2}$ Bor.

26^{ta} magnitudinis 6^{tæ} multo minor.
 Borealius trianguli in capite Borei.
 Afc. recta a Scheat Peg. 9° 0' 0"
 Viceversa ab Aldebora 8 55 23
 Afcensio R. media 8 57 $\frac{2}{3}$
 Declinatio Borea 26 44 $\frac{3}{4}$
 Resp. Longitudo 19° 12 $\frac{1}{3}$ ' ∇
 Latitudo 20 55 $\frac{3}{5}$ B.

27^a magnitudinis 6^{tæ} min.
 Trium australior in triangulo.
 Afc. R. a Scheat Peg. 8° 30' 12"
 Viceversa ab Aldeb. 8 28 2
 Afcensio R. emenda.a 8 29
 Declinatio Borea 24 52
 Resp. Longitudo 17° 56 $\frac{1}{4}$ ' ∇
 Latitudo 19 24 $\frac{1}{6}$ B.

28^{va} magnitudinis 6^{tæ} min.
 Antecedens trianguli in capite χ bor.
 Afc. recta a Scheat Peg. 7° 1 $\frac{1}{2}$ '
 Viceversa ab Aldeb. 7 2
 Afcensio recta media 7 1 $\frac{3}{4}$
 Declinatio borea 25 21 $\frac{3}{4}$
 Resp. Longitudo 16° 53 $\frac{1}{3}$ ' ∇
 Latitudo 20 24 $\frac{1}{4}$ B.

29^{na} mag. 6^{tæ} mai. In australi spina
 trium præcedens, prope sinistrum cu-
 bitum Andromedæ.
 Afc. R. ab Aldebora 10° 59' 0"
 Viceversa a 1^{ma} alæ Peg. 11 1 44
 Afcensio R. emendata 11 0 $\frac{1}{3}$
 Declinatio borea 19 17 $\frac{1}{2}$
 Resp. Longitudo 17° 46 $\frac{1}{2}$ ' ∇
 Latitudo 13 21 $\frac{1}{2}$ Bor.

30^{ma} mag. 6^{tæ} min. Media.
 Afc. R. a Scheat Pegasi 11° 31 $\frac{1}{2}$ '
 Declinatio borea 18 24 $\frac{3}{5}$
 Resp. Longitudo 17° 52' 26" ∇
 Latitudo 12 21 24 B.²

¹ Latitudo est australis, ut ex ascensione recta et declinatione demonstrat calculus. Omnes tamen codices catalogi nobis noti (sicut etiam *Progymn.*) borealem præbent.

² Adscriptum est in margine: »Distantia huius a Scheat Pegasi bis diuersis temporibus eadem reperta est. Viceversa autem ab oculo χ non». . . Folium hic resectum est.

31^a mag. 6^{tae}.

Trium infima & australis.

| | |
|--|---------------------|
| Afc. R. ab Aldeb. | 12° 0' 10'' |
| Viceversa a 1 ^a alæ | 12 5 2 |
| Ascensio R. mediata | 12 3 |
| Declinatio borea | 17 31 $\frac{1}{2}$ |
| Resp. Longitudo 17° 58 $\frac{5}{8}$ ' V | |
| Latitudo 11 20 $\frac{3}{4}$ Bor. | |

32^{da} mag. 5^{tae}.

In aluo duarum quæ borealior seu in latere.

| | |
|--------------------------------------|--------------|
| Afc. R. ab Aldebora | 14° 20' 56'' |
| Viceversa a 1 ^a alæ Peg. | 14 19 19 |
| Ascensio R. emendata | 14 20 |
| Declinatio borea | 25 6 |
| Resp. Longitudo 23 7 $\frac{2}{3}$ V | |
| Latitudo 17 25 $\frac{5}{6}$ Bor. | |

33^{ia} mag. 5^{tae}.Quæ magis in austrum in media...¹

| | |
|--|---------------------|
| Afc. R. ab Aldebora | 12° 56' 30'' |
| Viceversa a 1 ^a alæ Peg. | 12 58 7 |
| Ascensio R. emendata | 12 57 $\frac{1}{3}$ |
| Declinatio borea | 22 26 |
| Resp. Longitudo 20° 48 $\frac{1}{6}$ ' V | |
| Latitudo 15 30 $\frac{1}{6}$ Bor. | |

34^{ta}non conspicitur².35^{ta} mag. 5^{tae} min.Quæ sequitur mediam trium in...³

| | |
|--|---------------------|
| Afc. R. ab Aldeb. | 12° 21' 20'' |
| Viceversa a 1 ^a alæ | 12 24 22 |
| Ascensio R. emend. | 12 23 |
| Declinatio borea | 18 52 $\frac{1}{2}$ |
| Resp. Longitudo 18° 49 $\frac{1}{2}$ ' V | |
| Latitudo 12 27 $\frac{1}{2}$ Bor. | |

¹ Folium resectum est.² Deest in catalogo, est stella B. D. + 19°. 226, mag. 6.³ Debet esse »in australi spina«. Folium resectum est.

ANNOTATIO EDITORIS.

Catalogus stellarum in codice Hauniensi 316 (G) aßervatus, quem in tomi X p. XVIII ad finem hujus tomi nos exhibituros esse promissimus, in tomo XII post observationes anni 1592 locum tenebi¹.

QUÆ UNDECIMO TOMO CONTI- NENTUR.

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F. HENDRIKSEN
NUMERUS EXEMPLORUM VENALIUM: 225

UNDECIMUS TOMUS PRELUM RELIQUIT
DIE 6 MENSIS SEPTEMBRIS
ANNO MCMXXIV

BINDING SECT. JUL 29 1970

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